The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

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R. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

...ness transacted in all descriptions of MINING Stocks and Shares (British Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, ...nces, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, Dock Shares.
...ness negotiated in Stocks and Shares not having a general market ...
...ests in COLLIERY and IRON Shares, and in the principal WAGON and ...FACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.
...ests in all the principal COTTON SPINNING Shares.
...R. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all ...ING Towns of the United Kingdom, is prepared to deal in the various ...ral Stocks and Shares at close market prices.
ACCOUNTS OPENED FOR THE FORTNIGHTLY SETTLEMENT.
...Daily Price List, issued at 5 P.M., giving latest Quotations up to close of ...ess—3 P.M. Also, on the 1st of every month a List of all Securities cur...ntly in upon the Mining and Stock Exchanges, with latest prices, current ...ends, rate of interest yielded at market price, &c.
MINES INSPECTED.
...ERS: CITY BANK, LONDON; SOUTH CORNWALL BANK, ST. AUSTELL.

...IAL DEALINGS in the following, or part:—

...fields,	20 Hultafall.	50 Rookhope, 18s. 6d.
...dence (fully pd.),	20 Richmond, £4 8s. 9d.
...s. 9d.	150 Javali, 7s. 6d.	10 Roman Gravels, £9½.
...ings, £3¼.	10 Lawes Chemical, £7⅛	50 San Pedro, 13s. 9d.
...pel House, £2½.	20 Leadhills, £5⅛.	50 South Aurora, 4s. 3d.
...ntine, 7s. 3d.	25 Llanrwst, £2¾.	20 St. Harmon, £2⅛.
...nbwrain, 7s. 6d.	20 Marke Valley, 18s. 3d	20 Tankerville, £6⅝.
...ngstall, £2 18s.	50 North Laxey, 14s.	50 Van Consols, 12s.
...edd and Merllyn.	50 North Patrick (19s. paid), 10s. 6d.	25 W. Tankerville, 18s.
...ngwinion, £3.		20 ditto (pref.), £2¼.
...ys, 12s. 6d.	20 Pateley Bridge, £2½.	20 W. Wye Val., £2 17s 6
...ent Laxey, £21.	50 Pestarena, 4s.	10 West Chiverton, £13¼
...olmbush, 33s.	100 Parys Moun., 8s.	10 Wheal Newton.
	20 Port Phillip, 9s. 6d.	75 Yorke Peninsula, 5s.

SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

...ERS are INVITED for:—

...ilverii Colliery.	10 D'Eresby.	20 Llangan.
...Parliament.	20 Derwent.	20 St. Patrick.
...Clementina.	50 Exchequer.	10 West Craven Moor.

...INESS also on hand in – East Craven Moor, Lisburne, Last Chance, ...n, New Zealand Kapanga, Pennant, Pandora, Plynlimmon, Santa Barbara, ...Wye Valley.

FOREIGN BONDS—ARGENTINE—EGYPTIAN—RUSSIAN, TURKISH, SPANISH, PERU.
RAILWAYS—HOME AND FOREIGN.
SPECIAL BUSINESS in the above, and Fortnightly Accounts opened on receipt ...ual lower.
...TEN WAR.—The latest Telegrams from the SEAT OF WAR are received ...ughout the day, and also the course of the Markets from EVERY CONTINENTAL ...
JAMES H CROFTS, 1, FINCH LANE, LONDON.

AQUARIUM, HOTEL, INSURANCE, AND MISCELLANEOUS SHARES.
SPECIAL BUSINESS in Brighton Aquarium and Royal (Westminster).
...ERS WANTED for 20 Yarmouth Aquarium.
...HOLDERS in Positive Assurance.
...ETAS of Halcomb Sack and New Sharlston Preference.
...BUSINESS TRANSACTED in all MISCELLANEOUS SHARES (of whatever ...cription) having LONDON or COUNTRY MARKET VALUES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

HULTAFALL LEAD.—SPECIAL BUSINESS in these shares ... close prices (either as BUYER or SELLER).
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

COTTON SPINNING SHARES.—BUSINESS in all OLDHAM ...SHARES, and in those of other DISTRICTS.
...SPECIAL BUSINESS in the following SELECTED SHARES:—

Name of Mill.	Last four dividends, per cent.				Closing quotations. Aug. 31. Buyers,	Sellers,
Central	26,	20,	10,	10	... £ 2¼	... £ 2½
Greenacres...	30,	20,	5,	15	... 3½	... 4
Green Lane	30,	25,	20,	20	... 60	... 65
Oldham Twist	26,	12,	15,	5	... 19	... 21
Royton	30,	20,	10,	10	... 1⅛	... 2
Shaw	20,	16,	10,	16	... 1¾	... 2¼
Star	25,	20,	8,	14	... 1⅛	... 2
Windsor	20,	10,	16,	10	... 2¼	... 2¾

NOTE.—The shares of good Cotton Spinning Companies pay remunerative divi... the mills being almost entirely conducted on the Co-operative System, ...the Limited Liability Acts. With a revival in trade the present rate of ...ends would be augmented.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.
ESTABLISHED 1842.

WILLIAM B. COBB, STOCK AND SHARE DEALER, 62, CORNHILL, LONDON, E.C.
Bankers: The Alliance Bank (Limited).

...ESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.

MR. WILLIAM H. BUMPUS, STOCK AND SHARE BROKER, 44, THREADNEEDLE STREET, LONDON, E.C.
[Established 1867.]

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

...holders, intending investors, and others who may be desirous of obtaining ...rmation and advice as to operations at the present time are requested to com...nicate.

FOR SALE, at prices annexed:—

...Alfredo, 6s.	40 East Caradon, 7s.	50 North Laxey, 16s. 3d.
...Argentine,	15 East Van, £4⅞.	70 Parys Mount., 8s.
...Assheton, 12s. 6d.	25 Frontino, £2 13s. 9d.	25 Pateley Bridge, £2¾.
...Aberdaunant, 9s. 6d.	10 Flagstaff, £2 16s. 3d.	60 Port Phillip, 9s. 6d.
...Bodidris,	30 Glyn, 12s. 6d.	50 Penstruthal, 7s.
...Carn Brea,	5 Great Laxey, £21¼.	15 Roman Grav., £9⅝.
...Dolcoath Cv., 10s. 6d.	50 Hultafall.	30 Richmond.
...Exmoor Creek, 10s.	100 I.X.L., 7s.	5 So. Condurrow, £7½.
...Extension of Chili,	50 Javali, 8s. 6d.	15 Tankerville, £6¾.
...Fortunales, 8s.	30 Kapanga, 26s.	50 Tecoma, 11s.
...Gogo Copper, £38¼.	20 Leadhills, £5⅝.	10 Van, £33¼.
...Great Consols, £3⅞.	35 Last Chance, 21s. 6d.	25 Van Consols, 13s. 6d.
...Herbert,	40 Marke Valley, 19s. 6d.	30 W. Tankerville, 19s 6d
...Hornachos, £6¼.	15 New Quebrada, £2¼.	40 W. Assheton, 13s. 6d.
...Hoskenger, 5s. 6d.	100 New Pacific, 6s.	

WILLIAM HENRY BUMPUS, SWORN BROKER.
Offices: 44, Threadneedle Street, London, E.C.

...ness transacted in Stock Exchange Securities and Miscellaneous shares of ...ery description. Fortnightly accounts opened. References given and required ...ts summary. A Stock and Share List forwarded free on application.
...ERS—The NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

IMPORTANT.

THE HULTAFALL (LEAD AND BLENDE) MINING COMPANY (LIMITED).

Mr. BUMPUS has SPECIAL BUSINESS in these Shares, which are recom...ended as a particularly eligible investment. A Circular containing every in...mation, and copy of Capt. R. Southey's report, will be forwarded free on appli...n, 44, Threadneedle-street, London, E.C.

MESSRS. PETER WATSON AND CO., 54, OLD BROAD STREET, LONDON, E.C.
BUSINESS in STOCKS and SHARES.
RAILWAYS, BANKS, DIVIDEND LEAD MINES, &c.
BANKERS: THE ALLIANCE BANK (Limited).
A CIRCULAR published MONTHLY. Single Copy, 6d.; Annually, 5s.

MR. ALFRED E. COOKE, STOCK AND SHARE DEALER, 76, OLD BROAD STREET, LONDON, E.C.
ESTABLISHED 1853.
Business transacted at NET PRICES in CONSOLS, ENGLISH RAILWAYS, BANKS, FOREIGN STOCKS, TELEGRAPHS, & MISCELLANEOUS SHARES.
DAILY PRICE LISTS of all STOCK EXCHANGE SECURITIES and MINES ready at 5·45 P.M., and forwarded to applicants.

EVERY FRIDAY EVENING IS PUBLISHED, in time for Evening Post,
THE INVESTOR'S GAZETTE,
Containing latest prices and advices from Mines, with other valuable intelligence for investors.
Terms of subscription—12 months, 10s.; 6 months, 5s.; 3 months, 2s. 6d.
A Single Copy sent on receipt of postage stamp.
ALFRED E. COOKE, 76, OLD BROAD STREET, LONDON.
ESTABLISHED 1853.

SPECIAL NOTICE.—As the "SPECIAL INVESTMENT CIRCULAR" will not be published for September, the "INVESTOR'S GAZETTE" this week contains an extra page. Immediate application should be made for this number.
ALFRED E. COOKE, 76, OLD BROAD STREET, LONDON.

MR. JAMES STOCKER, STOCK AND SHARE BROKER, AND MINING SHARE DEALER, 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
[Established 1848.]
BUSINESS transacted in all kinds of STOCK EXCHANGE SECURITIES BRITISH and FOREIGN MINING, COLLIERY, MANUFACTURING, and other SHARES.
SPECIAL BUSINESS in the following:—

Chapel House, £2 8s 9d	Marke Valley, 21s.	Chontales, 7s. 3d.
D'Eresby.	North Laxey, 15s.	Don Pedro, 9s. 6d.
Derwent, 42s.	Pateley Bridge, £2 3s.	Eberhardt, £6.
Devon Consols, £4.	Pandora, 15s.	Exchequer. 5s.
East Van, £5.	Parys Mountain, 8s.	Flagstaff, £2¾.
Grogwinion, £2 8s. 9d.	Penstruthal, 5s. 9d.	Frontino, £2¾.
Great Laxey, £21⅛	Roman Grav., £9⅝.	I. X. L., 5s. 9d.
Glenroy, 18s. 9d.	Rookhope, 18s.	Javali, 7s.
Glyn, 13s. 6d.	Tankerville, £6⅝.	Last Chance, £7⅛.
Holmbush, 31s. 6d.	Van Consols, 11s. 6d.	N. Zealand Kap., 22s 6d
Leadhills, £5¾.	West Chiverton, £12⅞.	Port Phillip, 9s.
Ladywell, 19s.	West Tankerville, 19s. 6	Richmond, £4⅛.
Llanrwst, £2¾.	West Wye Valley, £2 8	Tecoma, 9s. 6d.

Belstone, Bodidris, Combmartin, East Chiverton, Gorsedd and Merllyn, Llanidloes, Monydd Gorddu. Pennerley, Plynlimmon, West Craven Moor, Wheal Grenville, Wheal Newton, Argentine, Almada, Cedar Creek, Chicago, Colorado, Condes of Chili, Hultafall, Pestarena, San Pedro, South Aurora, Yorke Peninsula.
JAMES STOCKER, SWORN BROKER.
Consols, Foreign Bonds, Railways, Bank, Telegraph, Gas, and all miscellaneous Shares bought and sold, and fortnightly accounts opened for same. Shares sold for forward delivery on receipt of cover. List of prices and every information forwarded on application. References given and required when necessary.
BANKERS: LONDON AND WESTMINSTER.

JOSEPH JOHN PYNE, STOCK AND SHARE BROKER, AND MINING SHARE DEALER, 6, BISHOPSGATE, LONDON, E.C.

Mr. PYNE having been connected with MINING ENTERPRISE for upwards of FOURTEEN YEARS, and having been a DIRECTOR of MINES in SHROPSHIRE, MONTGOMERYSHIRE, CARDIGANSHIRE, CARNARVONSHIRE, YORKSHIRE, and in VENEZUELA, has had great opportunities of becoming acquainted with this particular branch of industry, and will always be desirous of giving every information in his power to all parties transacting business with him.

ALL DESCRIPTIONS OF SHARES are dealt in, including BRITISH and FOREIGN STOCKS, and RAILWAY SECURITIES.
A DAILY SHARE LIST issued, giving latest quotations up to the close of the market.
AN EXTENDED LIST made up to the first of every month of all securities usually dealt in, giving highest and lowest prices for the month, the current dividends, and when payable, with amount of interest calculated at the present market price. Will be forwarded when desired.
MR. PYNE DOES NOT ISSUE ANY CIRCULAR.
BANKERS—THE ALLIANCE BANK (LIMITED).

MR. T. E. W. THOMAS, SHARE BROKER, 3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.
The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—

	Buyers.	Sellers.		Buyers.	Sellers.
Aberdaunant	7s. 6d.	9s. 6d.	Minera	£ 17	£ 20
Argentine	£ 2	£ 3	North Laxey	15s.	17s.
Assheton	¾	1	New Quebrada	2¼	2⅝
Bodidris	1	1¼	New Zealand Kapanga.	1¾	1¾
Carn Brea	24	26	Parys Mountain	7s.	9s.
Derwent	1¾	2¼	Pateley Bridge	2	2¼
Devon Great Consols	3½	4	Richmond	4¼	4½
Dolcoath	24	26	Roman Gravels	9½	9¾
Don Pedro	7s.	9s.	Rookhope	19s.	21s.
Eberhardt	5⅞	6⅛	San Pedro	⅛	¼
East Caradon	5s.	10s.	St. Patrick	1	1¼
East Van	4½	5	South Condurrow	7¼	8
Exchequer Gold	4s.	6s.	Tankerville	6½	7
Flagstaff	2¾	3	Tincroft	11	12
Glenroy	⅞	1⅛	Van	30	32
Glyn	9s.	11s.	Van Consols	9s.	11s.
Great Laxey	20½	21⅛	West Chiverton	12½	13
Javali	7s.	9s.	West Pateley Bridge	1	1⅛
Last Chance	⅞	1	West Godolphin	2	2⅛
Ladywell	17s. 6d	20s.	West Tankerville	⅞	1
Llanrwst	2	2½	W. Grenville	1⅛	1⅜
Leadhills	5⅛	5¾	Wheal Kitty	1	1⅛
Marke Valley	1	1¼			

MR. THOMAS THOMPSON, JUN., STOCK BROKER, 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
Mr. THOMPSON transacts business in every species of Stock Exchange and Mining Securities.
Mr. THOMPSON affords reliable information to investors, and can give, when desired, a list of first-class Stocks and Shares, yielding 12 to 14 per cent. dividends upon present prices.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER, 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 27 years), has SPECIAL BUSINESS in—Grogwinion, Chapel House, St. Harmons, Hultafall, Condes of Chili, Hornachos, Monydd Gorddu, Alitami, Exchequer, Wye Valley, Cakemore Colliery, Gorsedd and Merllyn, Clementina, Bodidris, Red Rock, Ladywell, Perkins Beach, Positive Assurance, East Craven Moor, Van, Minera, Aberdaunant, Gold Run, Wheal Newton, North Cornwall, Cedar Creek, Cambrian, Holmbush, Tolima.
SPECIAL BUSINESS in DEVONPORT and TIVERTON BREWERY shares. The profits for the last quarter are the largest made by the company, while the past fortnight's brewings are the largest ever made.

MR. CHARLES THOMAS, MINING AGENT, STOCK AND SHARE DEALER, 3, GREAT ST. HELEN'S, LONDON, E.C.

MESSRS. A. W. THOMAS AND CO., 10, COLEMAN STREET, E.C.
MINING AGENTS, AND STOCK AND SHARE DEALERS.
"INVESTMENTS AND SPECULATIONS FOR 1877."
Price Sixpence.

FERDINAND R. KIRK, STOCKBROKER, 5, BIRCHIN LANE, E.C., has BUSINESS in—

20 Glenroy, 19s. 6d.	20 Chapel House, £2½.	20 Lawes Chemical.
50 Parys Mountain, 7s 6	50 Don Pedro, 10s.	30 Cardiff, £1¾.
40 Rookhope, 19s.	20 Hultafall.	50 Van Consols, 12s. 6d.
20 Llanrwst, £2¾.	20 Kapanga.	30 New Quebrada.

MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON, LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER, No. 30, GREAT ST. HELEN'S, LONDON, E.C.

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"HOW AND WHEN TO INVEST."—SUGGESTIONS TO LARGE OR SMALL CAPITALISTS.
"A successful adviser needs not recommendation."
By E. J. BARTLETT, of No. 30, GREAT ST. HELEN'S, LONDON, E.C.

MR. T. J. BEARD, METAL AND COMMISSION AGENT, 31, THREADNEEDLE STREET, LONDON, E.C.

STRONGLY RECOMMENDED at present price the HULTAFALL LEAD AND BLENDE MINING COMPANY. Copy of a private report will be sent on application, and every information given.
The proximity of Mr. Beard's offices to the Stock Exchange enables him to transact business in Consols, Foreign Stocks, Rails, and other Securities promptly, and the prices of any Stocks or Shares will be forwarded by wire, if desired.
References exchanged.

MESSRS. ENDEAN, FISHER, AND CO., STOCK AND SHARE DEALERS, 3, LOMBARD COURT, LOMBARD STREET, LONDON, E.C.
Bankers: London and Westminster, Lothbury,
From a thorough knowledge of their business, based upon many years' experience, are PREPARED to ADVISE on every description of SECURITY for INVESTMENT or SPECULATION.
Their sources of information, Home and Foreign, being various and extensive, E., F., and Co 's clients and the general public may place the most implicit confidence in such advice as they deem it their duty to give. Statements emanating from their firm will be founded only on well-authenticated facts, and may, therefore, be relied upon.
Orders or Telegrams for the Sale or Purchase, for cash or account, promptly executed on receipt.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER, 29, BISHOPSGATE STREET, LONDON, E.C. (Established 21 Years), can sell the following SHARES, at prices annexed:—

15 Argentine, £2⅝.	15 Flagstaff, £2 17s. 6d.	30 Perkins Beach, 20s.
40 Aberdaunant.	10 Gorsedd & Merllyn.	40 Port Phillip, 9s. 6d.
10 Alitami.	15 Glenroy, 19s. 6d.	30 Rookhope, 18s. 6d.
80 Almada, 5s.	10 Grogwinion, £2⅞.	10 Red Rock, £1¾.
15 Bampfylde, 6s. 3d.	15 Hultafall, £5½.	15 Richmond, £4 10s.
40 Bodidris, £1 2s. 6d.	20 Last Chance, 19s. 6d.	10 Roman Grav., £9 12s 6
2 Basset, £3 2s 6d.	15 Llanrwst.	20 Tolima, £1.
20 Condes of Chili, £2 6 3	10 Leadhills, £5 12s. 6d.	10 Tankerville, £6 15s.
15 Colorado, £1¾.	30 Nth. Laxey, 16s.	20 Van Consols, 11s.
20 Cakemore, £2.	20 Marke Valley, 19s. 6d.	10 W. Craven Moor, £10¼
20 Chicago, £3 5s.	50 Malabar, 5s.	5 W. Wye Val., £3⅛.
5 Devon Consols, £4 2 6	30 Mon. Gorddu, £2 1s.	5 Wye Valley, £3⅝.
10 Derwent, £2 2s. 6d.	15 Pennant, £5.	5 W. Chiverton, £13.
15 Eberhardt, £6 1s. 3d.	60 Pestarena, 3s. 9d.	W. Goginan, 13s. 9d.
25 East Caradon, 7s. 3d.	40 Pandora, 16s.	25 Kapanga, £1 6s. 3d.
75 Exchequer, 4s. 9d.	15 Pateley Bridge, £2 6s.	50 W. Tankerville, 19s 6d
20 Frontino, £2 16s. 3d.	60 Parys Mount., 8s.	50 W. Godolphin, £2 1s 3

GREAT HOLWAY—SPECIALLY RECOMMENDED.
Shares bought and sold at net prices. Telegrams promptly attended to.

MESSRS. W. J. TALLENTIRE AND CO., STOCK BROKERS, AND DEALERS IN BANK, TRAMWAY, MINING, AND MISCELLANEOUS SHARES, 20, CHANGE ALLEY, CORNHILL, LONDON, E.C.,
Transact business in Stock Exchange Securities and Mining Shares of every description, either for immediate cash or the usual bi-monthly settlements, and also afford advice personally or by letter to executors, trustees, capitalists, and investors of every class in the selection of Securities for safe and profitable investment, their experience of the markets, extending over a period of more than 17 years, together with special facilities for acquiring information, enabling them to act beneficially for clients.
They have established Corresponding Agencies in all the principal towns of the United Kingdom, and are prepared to deal in the various local Stocks and Shares at close prices. Orders per post or telegraph receive prompt attention.
INVESTORS SHOULD APPLY for a copy of Messrs. W. J. TALLENTIRE and Co.'s Circular, SENT POST FREE. It contains valuable information on Foreign Stock, Railway, Mining, and General Investments.

TO INTENDING INVESTORS AND SHAREHOLDERS.

MESSRS. W. J. TALLENTIRE AND CO., 20, CHANGE ALLEY, CORNHILL, LONDON, E.C., have the following MINING SHARES FOR SALE.
OFFERS CAN BE MADE, OR PRICES WILL BE FORWARDED:—

200 ABERDAUNANT	LEAD.	350 PERKIN'S BEACH	LEAD.
200 BODIDRIS	do	100 PANDORA	do
50 CAMBRIAN	do	25 PENNANT	do
40 EAST CRAVEN MOOR	do	100 PENNERLEY	do
20 EAST VAN	do	100 ROOKHOPE	do
200 GLENROY	do	25 ROMAN GRAVELS	do
80 GLYN	do	50 RED ROCK	do
50 GREAT DYLIFFE	do	15 ST. HARMON	do
5 GREAT LAXEY	do	50 SOUTH CONDURROW	TIN.
100 GREAT WEST VAN	do	100 TALYBONT	LEAD.
20 GROGWINION	do	25 TANKERVILLE	do
30 LEADHILLS	do	2 VAN	do
120 LLANRWST	do	60 VAN CONSOLS	do
50 MONYDD GORDDU	do	50 WEST TANKERVILLE	do
200 MEDLYN MOOR	TIN.	30 WEST WYE VALLEY	do
200 NORTH LAXEY	LEAD.	20 WHEAL GRENVILLE	do
100 PARYS MOUNTAIN	COPPER.	20 WEST CRAVEN MOOR	do
200 PENSTRUTHAL	TIN.	25 WEST CHIVERTON	do

N.B.—Some of the above will be sold on specially favourable terms to cash purchasers.

SPECIAL NOTICE.

THE HULTAFALL (LEAD AND BLENDE) MINING COMPANY (LIMITED).
Capital £60,000, in 12,000 Shares of £5 each, fully paid.
Intending purchasers of shares in this very promising undertaking should make immediate application to W. J. TALLENTIRE and Co, 20, Change alley, London, E.C., who have a LIMITED NUMBER FOR SALE on the most advantageous terms.
The mines have been specially inspected by—
Capt. RICHARD SOUTHEY, of West Chiverton Mine,
Capt. ARTHUR WATERS, of Roman Gravels, Tankerville, and Lead Hills Mines,
and by other eminent mining authorities.
Copies of their reports sent post free on application to—
W. J. TALLENTIRE AND CO., 20, CHANGE ALLEY, CORNHILL, LONDON, E.C.

LOCOMOTIVE TANK ENGINES, fitted with COPPER FIRE-BOX, BRASS TUBES, STEEL TYRES, and in finish equal to the MAIN LINE LOCOMOTIVES, FOR SALE, on Cash or Deferred Payments.—Apply to—
FOX, WALKER, AND CO., ATLAS WORKS, BRISTOL.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES—No. XL.*

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Certificated Mining Engineer.
(Formerly Student at the Royal Bergakademie, Clausthal).
[The Author reserves the right of reproduction.]

SECTION III.

BLASTING MATERIALS.

ORDINARY GUNPOWDER.—Until within the last ten or fifteen years ordinary gunpowder has been the chief blasting material, and for ordinary mining purposes it is still the most extensively used. Gunpowder consists of an intimate mixture of nitre—*i.e.*, saltpetre, charcoal, and sulphur, in the proportion of 1 part each of nitre and of sulphur, and 3 parts of charcoal.

1.—The great explosive power is due to the sudden development of a large volume of nitrogen and carbonic acid gases, which at the ordinary temperature of the air would occupy a space to about 300 times the bulk of the powder used; but from the intense heat developed at the moment of the explosion, the dilatation amounts to at least 1500 times the volume of the gunpowder employed. Supposing the mixture were pure the only solid residue, therefore, is sulphide of potassium, and part of this is also volatised by the heat of the explosion, burning and forming the white smoke. In reality, however, the products of the explosion are quite different, partly on account of the moisture in air, partly because the charcoal employed is never pure carbon.

Blasting powder contains generally less saltpetre than musket powder, and the expansive force is less, since the object of blasting is to loosen and detach pieces of rock by a (figuratively speaking) gradual heave, and not to shoot them from their position with a high initial velocity. The composition of French powders is as follows:—

	Nitre.	Carbon.	Sulphur.
Musket ...	75 per cent.	12·5 per cent.	12·5 per cent.
Sporting ...	77 „	13·5 „	9·6 „
Blasting ...	63 „	17·0 „	20·0 „

The following is the composition of the powder used in the Hartz Mines, obtained from the Lauthental Powder Mill, of which there are three sorts—(A), the strongest, being in coarse grains; (B) intermediate, in middle-sized grains; and (C), the weakest, in fine grains.

	(A).	(B).	(C).
Saltpetre	63·12 per cent.	61·94 per cent.	64·32 per cent.
Sulphur	26·44 „	16·56 „	16·24 „
Carbon	19·18 „	20·04 „	17·76 „
Water (moisture)	1·30 „	1·33 „	1·67 „

In the copper mines at Mansfeld the composition of the powder used is—66·36 saltpetre, 11·75 sulphur, 20·95 charcoal, and 0·93 moisture.

Of the three materials of which gunpowder consists—sulphur, charcoal, and saltpetre—only these two last are, strictly speaking, essential to it. The gas is actually generated from the carbon and saltpetre, and, therefore, a mixture of these only will explode. On ignition the charcoal decomposes the saltpetre, its combustion being supported by the oxygen of the latter, in combination with which it forms carbonic acid, and this, mixed with the nitrogen from the saltpetre, is the gas which produces the useful effect. But when gunpowder is made with saltpetre and charcoal only the power developed by the explosion is comparatively trifling, and sulphur has to be added to increase it to such an extent as to make it really efficient. The sulphur acts in two ways to this end—1, it ignites at a lower temperature than the carbon and saltpetre, and its combustion accelerates the decomposition of the saltpetre and the generation of the gas, by combining with the potassium of the saltpetre and liberating the oxygen; 2, by the heating of the carbonic acid and nitrogen it gradually increases the volume, and therefore the expansive force.

The charcoal which is used must be thoroughly burned, but not at too high a temperature; that from the willow, alder, or logwood is preferred for the purpose. The sulphur used is always distilled sulphur (never flowers of sulphur) reduced to a fine meal by grinding. Flowers of sulphur always contain sulphurous acid, which speedily becomes converted into sulphurous acid, and attracts moisture. The three materials having been separately ground and sifted, are mixed in the proper proportions, and are ultimately blended in a revolving drum. They are then made into a stiff paste with water, and ground for some hours under edge stones. The slightly coherent mass thus produced is broken up, and spread in layers about an inch in thickness between gun-metal plates. It is then subjected to a pressure of about 70 tons per square foot under an hydraulic press, and a cake (press cake) is thus obtained. This, while still damp, is granulated by submitting it to the action of toothed rollers in a machine constructed for the purpose. The grains are next sorted by means of sieves of different sizes, after which they are thoroughly dried in closets heated by steam, and finally glazed by being placed in revolving barrels. Mining powder is glazed by adding powdered graphite in the polishing barrels. This diminishes the hygroscopic character of the powder, and retards the rate of ignition. The object of granulating the powder is to favour the rapidity of inflammation, by leaving interstices through which the flame is enabled to penetrate and envelope each grain. The ignition of the whole charge does not take place simultaneously throughout, nor is it desirable that it should do so, otherwise sufficient time would not be allowed for the rock to receive the full benefit of the expansive force of the gases generated. Too rapid an action would confine the result to shattering the rock in the immediate neighbourhood, and not to the loosening of the rock over a considerable space. When a prolonged heaving force is required, as in most mining operations, the sudden action of the powder is sometimes retarded by mixing sawdust with it, though for some purposes, such as quarrying limestone and earthwork excavations, a sudden action is advantageous, as it shatters the mass so as to make it more manageable for tipping into wagons with spades.

A good powder should possess the following properties:—The grains should be pretty regular in size, in order that the ignition may also be regular; this would be judged of by the eye. The grains should he hard, not crumbling, which would be tested by rubbing a small quantity on the palm of the hand. It must be free from intermingled dirt and dust, which could be proved by shaking it on a piece of clean white paper. Lastly, it should be thoroughly dried, as moisture lessons very considerably its effect (since part of the heat of the explosion goes to convert the moisture into steam), and although the damp powder may be dried, still after being once thoroughly wet it does not give so good an effect on being again dried. This will be evident when we remember that powder is a mechanical mixture, and that its most essential constituent—nitre—is soluble in water. Hence in the packing and storing of powder the greatest care should be taken to preserve it from the influence of moisture. Adulteration sometimes takes place in the manufacture of gunpowder by using part soda nitre instead of potash nitre exclusively. This is easily discovered by digesting a small quantity of the powder in water, and allowing the solution to crystallise, when on examining with a magnifying glass the potash nitre crystals, will be immediately recognised from their long acicular capillary forms, and crystallising in the rhombic system. The rhombohedral crystals of soda nitre will be immediately distinguished by their nearly cubical forms.

Polished powder is not so soon ignited, and has less effect; rough splintery, not round, grained powder ignites more quickly, but does not retain its good qualities so long, and gives a great amount of dust. According to experiments the size of the grains exercises an influence on the effect of the powder, that which passes through a sieve 3 millemeters fine having a greater effect than that which remains on the sieve. The finer the powder is the greater quantity does a given volume contain, and as powder is often bought by volume a smaller volume of fine grained powder should be used than of a coarser sort.

The strength of a powder is tested in different ways:—

1.—By the use of the éprouvette mortar, as is generally practised in the army. A small mortar is placed inclined at an angle of 45° upwards, and receives a fixed charge of powder without ramming. A ball of copper or bronze of a determinate weight is then placed in the mortar, by which the horizontal throw due to a given charge is determined.

2. On the Hartz and at Freiberg the bar test is often used. This consists of a small mortar firmly fixed to a solid foundation, and carries upon it a plate of determinate weight, which at the sides fit two vertical bars, which serve as conductors. To the top of the plate a vertical ribbed or toothed rod is fixed. This bar carries at its upper end a cross-piece, which likewise slides on the two conductors. This bar carries a scale. Two catches are fixed to the two side conductors. When the powder in the mortar is fired through the touch-hole the plate with the rod is projected to a certain height, when the latter is caught by two catches, and prevented from falling, and by means of the scale on the bar the height of projection is read off.

The pistol test consists of a pistol-shaped barrel, the mouth of which is kept closed by a plate fastened to the circumference of a wheel, which is divided into degrees on the rim. The plate is kept pressed against the mouth of the barrel by means of a spring, which acts on the wheel. When the powder is ignited the plate is driven back, turning the wheel through a given angle, which is read off by means of the divided rim. Formerly the most usual method in the army for experimenting on the strength of different charges of power was by means of the ballistic pendulum. This consists of a sheet-iron cylinder, to one end of which an iron plate is bolted. Next to this iron cover a mass of lead is placed several inches thick, and next to this a solid wooden cylinder, which fills the remainder of the space within the sheet-iron cylinder. This, which constitutes the bob of the pendulum, is slung in a horizontal position from a horizontal axis. The ball from the gun generally passes through the wood into the leaden backing, carrying the pendulum back through a certain angle, which is read off either on a circular arc, or calculated from the cord of the arc.

The most modern method, however, is by means of electricity. The ball can be made by contact to open or close a galvanic circuit, and thus register the instant of passing any point from leaving the mouth of the gun, and thus its velocity is determined, from which the effect of the powder can be calculated.

Gale has proposed a method to make the powder non-explosive, so that it can be transported, stored, and even brought into contact with fire without danger. Ordinary glass is to be brought to a white heat, and then suddenly quenched in cold water. In consequence of this proceeding the glass is rendered very brittle, and can be readily ground into a fine powder. The finely powdered glass is to mixed with the gunpowder in the proportions of 2 to 1, 3 to 1, or 4 to 1, according as it is required to make the powder simply inexplosive, or quite incombustible. In order to obtain the powder again ready for use it is to be placed upon a fine copper sieve, when the glass powder will fall through, leaving the gunpowder remaining on the sieve. To render powder inexplosive by mixing it with a sufficient quantity of an inexplosive substance does not present any great difficulties, but the proposal of Gale has two evident disadvantages. The gunpowder must be comparatively coarse compared with the glass powder (so that for fine powder this method is quite inapplicable), and the glass, being so considerably harder than the gunpowder, will be sure to cause a loss of powder, by converting part of the coarse grains into a fine powder during the mixing and the shaking on the sieve, which would fall with the glass powder through the sieve; and, besides, it is well known how readily glass condenses any moisture on its surface.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath, Dr. VON GRODDECK, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

ROYAL CORNWALL POLYTECHNIC SOCIETY.

The forty-fifth annual exhibition of the Royal Cornwall Polytechnic society has been held this week at Falmouth. The weather was not in all respects so satisfactory as was to be desired, but the exhibition itself was a very good one, and showed plainly enough that as this useful institution approaches its jubilee it suffers no falling off in the extent and character of its operations. Among the general departments the fine arts may be mentioned as thoroughly up to the mark, including many loans of considerable excellence. The photographs were fewer in number than last year, but were very good. Naval architecture were a fair average, and lace and art needlework in some respects of unusual merit. The chief features in ornamental art were the magnificent displays of terra cotta, from the works of the Watcombe and Torquay Companies. Natural history was meagre. However, we have not to do with these sections, but with that devoted to mechanics. This was of very high merit indeed, not merely as regarded the number but the character of the exhibits. There never was a year, too, in which so many machines had to be put to the test of actual operation. In this the Falmouth Dock premises afford facilities which could be obtained in no other town in Cornwall.

Two or three personal remarks demand attention before we proceed to describe the most salient features of the mechanics of the exhibition in detail. Since the last exhibiton one of the oldest friends of the society—Mr. R. W. Fox—has passed away from a honoured and happy old age; but his daughter, Miss Fox, to whom the first suggestion of the society was due, evinces as much interest in its proceedings as ever, and has been actively occupied in some of the departments this week. Mr. Richard Taylor, F.G.S., the President of the year, was when the society started its first honorary secretary; and it singularly happens, too, that Mr. Jordan, who 40 years ago was its first paid secretary, has this year visited Falmouth for the first time for twoscore years with a hand borer of his invention. Mr. Robert Hunt, another old friend of the society, though in Cornwall, was kept away from the meeting by illness.

The Rider compression engine was shown by Messrs. Hayward Tyler and Co., both in the hall and at the docks, where a half-horse engine worked admirably. This is the first time that a caloric engine has been shown at the Polytechnic, and the "Rider" is beautifully simple. The leading features are the use of highly compressed cold air, its thorough heating without change of volume, and its efficient expansion to a point to or below the pressure of the atmosphere, and this is accomplished without the use of valves, springs, levers, or any delicate work whatever, the only moving parts being the plunger shafts and connections. One of the great advantages of the engine is its small compass, as it requires no boiler; others are its freedom from all possibility of explosion, and its handiness of management, as it can be run by anybody. The firing up does not need to be done oftener than once in three-quarters of an hour, and the consumption of coke is only 6 lbs. per horse-power per hour. It received a first silver medal.

Messrs. Hayward Tyler, in addition to their Rider engine, exhibited a model of one of Cope and Maxwell's patent self-governing steam pumping-engines, with an additional wooden model effectively indicating in section its peculiar valve motion. The result is effected by a combined movement given by an auxiliary cylinder and cataract which moves with the main piston. If the engine runs away it overruns the action of the auxiliary cylinder, and instantly cuts off the steam. If extra work is thrown on the engine the auxiliary cylinder, on the other hand, overruns the cataract, and more steam is admitted. To this a second silver medal was awarded.

The Phosphor Bronze Company obtained a first silver medal for a large collection of exhibits illustrating the various uses to which this invaluable alloy can be and is put. Our readers are aware that phosphor bronze is a compound of tin, copper, and phosphorus in certain proportions, according to the special work required. Among the exhibits were several bearings that had been in constant use for long periods without appreciable injury, and a plunger that had been in operation 572 days without giving any evidence that it had been in work at all. Few better illustrations of the wear-resisting properties of phosphor bronze could have been afforded.

The Pulsometer shown by Mr. Warrington is one of the quaintest and most peculiar little machines that has been seen for a long while. In principle its inventors, Messrs. Hodgkin, Nethas[illegible] Co. have really fallen back on the old fire or steam-engine [illegible] Savary, itself an improvement on the famous suggestion of [illegible] Marquis of Worcester. But the details are new, and the result [illegible] that we have here a pumping apparatus calculated to be of spe[illegible] utility under many conditions. It will raise water and [illegible] liquids 50 to 80 ft. without the intervention of any of the [illegible] component parts of a pumping-engine. There are no cylind[illegible] piston-glands, stuffing-boxes, or rods. It consists simply [illegible] couple of steam chambers, containing alternately the liquid pum[illegible] and the pumping steam. The valves are simple balls. The act[illegible] depends entirely upon the condensation of the steam and the for[illegible] tion of a vacuum. This admits the water, which is again dri[illegible] out by the steam, and the alternate repetition of the process in e[illegible] chamber keeps up a continuous stream. The pulsometer was fi[illegible] in the graving dock at Falmouth, and worked admirably. [illegible] origin of the name will be readily seen in the alternate pulsat[illegible] of the liquid in the chambers, which may be compared, in short[illegible] the venticles of the heart. The same principle has been utili[illegible] with the utmost success on a machine for feeding boilers, under [illegible] name of the "hydrotrophe." The details, however, differ wid[illegible] from those of the pulsometer, to suit the altered character of the w[illegible] required. A second silver medal was awarded for both.

Mr. Jordan in his patent pneumatic rock-drill has elaborate[illegible] novel mode of using the elastic force of compressed air, which [illegible] likely to be found useful for many purposes and in many situati[illegible] where the employment of power drills is impossible. The work[illegible] parts of the machine consist of close cylinders fitted with a pis[illegible] so arranged as to be perfectly air-tight during its up stroke, [illegible] yet admit of air passing it from beneath in the down stroke. [illegible] piston is drawn up through its stroke by a cam on a revolv[illegible] shaft at the rate of about 200 strokes a minute, and the revolv[illegible] and forward feeding motion of the drills are at the same time secu[illegible] by the percussion and friction of the cam on the face of the litt[illegible] block, so that all the requisite movements of the block are au[illegible] matic. The machine exhibited was driven by two men at wi[illegible] handles, but power could easily be applied. A blow of any requi[illegible] force within the limits of the power can readily be obtained, [illegible] cause it depends on the relative length of stroke and the sp[illegible] above the piston at its termination. Up to four atmospheres on t[illegible] surface of the piston may readily be utilised in this way. No [illegible] convenience arises from heat generated by compression, because [illegible] is instantly taken up by the expansion of the same quantity [illegible] hastening the down stroke. Thus drills may be fixed in any si[illegible] tion, and worked by any men capable of turning a grind-stone. [illegible] is thoroughly independent of all connection, is very portable, a[illegible] is likely from the cheapness of the outlay required to come i[illegible] very general use. It obtained a second silver medal.

Messrs. Le Gross, Mayne, Lever and Co., exhibit the "Ingersol[illegible] drill, with improvements. It was worked at the docks with t[illegible] greatest success, driving a hole of 2 ft. deep into the hardest gran[illegible] at the speed of 4 in. a minute, the number of blows per min[illegible] averaging 700. The "Ingersoll" has been exhibited at Falmo[illegible] before, but it did not work then with the same thorough success [illegible] yesterday. The chief improvements consist in the shortening [illegible] the cylinder by 1¾ in., and the bringing of the valve close tog[illegible] which results in considerable economy of power. A first sil[illegible] medal was awarded, the judges remarking that no drill shown [illegible] Falmouth had ever worked better.

The "desideratum" rock borer, exhibited by Messrs. Le Gross, Sh[illegible] Clark, and Co., unfortunately could not be worked before the judg[illegible] in consequence of an action to the piston. The mechanism is ve[illegible] simple; there is only one tappet-valve, and the working is p[illegible] fectly automatic. By the arrangement of a patent rifle suit t[illegible] piston has the whole of its top area exposed to the steam or co[illegible] pressed air when giving the blow, and is propelled with full pow[illegible] until the bit strikes the rock, when by the valve arrangement [illegible] cushion is formed at the end of the cylinder to protect it from [illegible] jury. A cushion is also formed in the top end of the cylinder [illegible] the return stroke. The machine but for the unfortunate casualty [illegible] slight in itself, but not admitting of immediate reparation at Fa[illegible] mouth—would, undoubtedly, have done well.

Messrs. Hathorn and Co. made a very successful trial of their a[illegible] compressor, calculated to work four drills. It is a very convenie[illegible] form, is moderate in price, and does not require any masonry fou[illegible] dations. The air is delivered at any speed or pressure. The valv[illegible] and valve-seats can be seen without breaking a joint, which is, [illegible] course, a very great advantage, and the other special recommend[illegible] tions claimed are that the heat by compression is reduced to a [illegible] minimum; absolute economy in first cost and after working. T[illegible] compressor was highly commended. A model was also shown [illegible] the Polytechnic Hall.

A novel form of arrangement is that of the dual engine of M[illegible] Somerset Mackenzie. Great increase of power is obtained in scre[illegible] propellers by using two screws rotating in opposite directions, d[illegible] taking the water of the other. By the use of a hollow shaft a[illegible] double engines this can very easily be accomplished, but Mr. Mc[illegible] kenzie has discovered how to do it with one cylinder—that is, [illegible] gets two reverse rotating motions from the action of one cylind[illegible] and piston. How this is managed it is not very easy to expla[illegible] without the aid of diagrams, but we may state that while one sha[illegible] is driven by an ordinary crank the other is driven by a kind o[illegible] slotted crank, with its head passing round the other shaft as it r[illegible] tates. This is the arrangement in the vertical engine—that of th[illegible] horizontal, which is about to be put in a boat recently construct[illegible] is somewhat modified, but the same in principle. Award deferr[illegible] for trial at sea.

Mr. Vosper (Plymouth) had the merit of contributing one of th[illegible] chief novelties of the exhibition, which was highly admired by [illegible] the judges, and which appears likely to be adaptable to a gre[illegible] variety of uses. It is a radial drill, for boring three parallel hol[illegible] at once, and the beauty of the arrangement is at once manifest. A [illegible] ball crank from the main axle terminates in a disc. In this are i[illegible] serted other three ball cranks, smaller, and bevelled so as to pu[illegible] each other. Each of these drives its own drill, and thus the simp[illegible] rotation of the axle is converted into the triple rotation of the drill[illegible] It is marvellously simple and effective. Another drill shown b[illegible] Mr. Vosper was a convenient form of combined drill and ratch[illegible] brace for use attached to a bench. The first bronze medal w[illegible] awarded to the radial.

Messrs. Le Gross, Shaw, Clarke, and Co. also exhibited a very us[illegible] ful little instrument—Royle's patent self-cleansing steam trap, whic[illegible] permits air and water of condensation to escape from steam pipe[illegible] without loss of steam. This was shown in action at the Dock[illegible] Nothing could be more simple or more effective, and it received a [illegible] first bronze medal.

Mr. Ocott (Manchester) showed a new form of press, which i[illegible] capable of exercising enormous power, and which operates by [illegible] quick motion from above, the action of which is taken from th[illegible] idea of the old throstle, resembling somewhat a worm and wor[illegible] wheel, and by a slower motion below, which is essentially an adapta[illegible] tion of the knuckle-joint levers, but worked by male and femal[illegible] screws from a winch, and also by a clutch lever in the centre, wit[illegible] which alone a lad can put on a pressure of 400 tons. These presse[illegible] are more rapid in their action and much cheaper on provision tha[illegible] the ordinary hydraulics, and at the same time are perfectly steady[illegible] It obtained a second silver medal.

Mr. Scott also exhibited his exceedingly clever dividing apparatu[illegible] This will divide at pleasure from 2 divisions up to 200,000 by [illegible] simple disc and stop, and without the use of any change wheels [illegible] The operation is, in fact, effected simply by the use of a small hinge[illegible] step, carried by a moveable slide placed on the edge of a plate whe[illegible] or disc. This also had a second silver medal.

Another of Mr. Scott's exhibits was a retort mouth for gasworks[illegible] which by the use of an annular steel ring and an undercut edge[illegible] enables the mouth of the retort to be closed with the greatest effi[illegible] ciency. To this a second bronze medal was awarded.

Messrs. Howe and Co. exhibited their patent tallow cup, a very [illegible] neat and capable arrangement; their low-water detector for steam [illegible] boilers, which is entirely self-acting; and their patent "Monarch" [illegible] stop valves, which give an unobstructed clear full way for air, ga[illegible]

water. They are very simple and economical, and open and shut with only a turn of the handle. The old screwed spindle is absolutely dispensed with. This was highly commended.

Mr. Holmes has invented new forms of his danger signals—one for use on land, and the other specially adapted to meet the needs of shipwreck. His signals are filled with a composition which ignites when water is admitted into the case, and which burns away violently, and is inextinguishable. One form of signal now invented is a shell to be fired from a mortar with life-line attached, in case of shipwreck. The other is intended to be used in case of railway accidents to illuminate the line, and act as a warning to approaching trains. In this instance the signal vessel is placed in the water on a tripod stand. First bronze medal awarded.

Mr. Warrington exhibited an exceedingly clever and efficient machine for cutting corks. The squared pieces of cork are pressed against a circular cutter and turned off with the greatest ease, an arrangement being made for the automatic stoppage of the feed when the supply of cork is exhausted. One of the most important points in the invention is the use of four knives in the feed groove, which slits the cork on each side as it comes to the cutter, and thus enables a circular cutter to be used. To this invention a first bronze medal was awarded. The "Warsop" light forging hammer was likewise shown by Mr. Warrington; it works with either steam or compressed air, is actuated by a treadle, and is designed to supersede the sledge hammer for ordinary heavy work. It is reported on most favourably as easy and economical, and had a first bronze medal.

Mr. Weinlich's fuel economisers have been found of high value in domestic use. The inventor has now applied the principle to steam boilers, covering the bottom of the fire-box with an iron plate, and admitting the air through vertical slits in the sides of cylinders projecting upwards into the fuel. Professor Gardner, who has tested the new economiser in practice, reports a gain of 50 per cent. in economy of fuel as the result of the application of this arrangement. The economiser was tried at the docks, and appeared to do well, but the judge thought it should be further tested before its capabilities could be fully settled.

Messrs. Korting Brothers sent an elaborate working section model of their injector, which makes the nearest approach to the delivery of boiling water into the boiler, delivering it at 170°. This is an advantage which practical engineers know how to appreciate. Another advantage of the injector is that it makes the circulation more uniform. It is rather of a complicated character, and hence is not very low priced, but the advantages which it offers renders it very valuable, and high testimony is borne to its utility in action. It is highly commended.

Messrs. Whitley Partners exhibited the "Allen Governor," which is an exceedingly ingenious and useful arrangement. A fan works in a drum partly filled with oil, and is driven at the rate of 350 to 1 revolutions per minute. This governor has been thoroughly tested, and has been found invariably to maintain the requisite speed, whatever may be the fluctuations with regard to the machinery, as long as there is sufficient steam made in the boilers to do the work. The high rate of speed acts advantageously in making the governor very sensitive. A first bronze medal was awarded.

Messrs. Whitley also showed Symons's patent "Standard" hand and foot pumps, which closely approximate to syphonic action. It is a concentric pump—the principle of the disc engine applied to pumping—and is a combined suction and force pump. It may be worked up to 1000 revolutions per minute.

Mr. Smith's patent "Steam Sentinel" safety-valve for preventing explosions from over pressure of steam is a decidedly clever idea. It combines a perfect safety-valve, pressure indicator, and alarm, and is loaded by a spring, to which, as it is provided with a double seat, the steam can have no access. These valves are regulated to any pressure, cannot be tampered with, and, therefore, sound an alarm directly the working pressure is exceeded. Such a valve, as was recorded at the enquiry, would have prevented the "Thunderer" catastrophe. For it Mr. Warrington received a first bronze medal.

Although Professor Graham Bell, the inventor of the telephone, was unable to be present, the telephones were shown and illustrated, and the judges awarded it a first-class medal.

The Lavendon lamp is an exceedingly useful application of the gas jet to the combustion of hydrocarbon oils. It was much admired by the judges, and a first bronze medal was awarded.

Among the minor exhibits of merit was Loft's patent check till, which is an absolute check upon any kind of dishonesty short of carrying the till bodily away. It records whenever and how often the till has been opened, the cash taken out, how much money there ought to be in it, and many other things too numerous to mention here, such and all invaluable to the employer. The testimonials in its favour are very numerous and very strong. It was highly commended.

Loft's bottle washer is also very ingenious. It was also exhibited in model, and a second bronze medal given.

As a very clever and useful device for household purposes we may commend Lindar's pneumatic bell arrangement, which was shown in working order and highly commended. It is a formidable rival of the telegraph bell apparatus, which has come so largely into use.

Messrs. Wright's "Eclipse" gas-making machine—an apparatus for the production of air gas from benzoline was shown in operation, and worked admirably. The gas produced a clear, white, steady light. It received a first bronze medal.

One of the greatest novelties exhibited—not mechanical—was the "gloss colorutus" carpet, invented by Mr. Gloyn. This is a *paper* carpet designed to imitate parquet flooring; the paper being printed with patterns to imitate different woods from photographs, so that the resemblance is absolutely perfect. The floor is prepared by being made perfectly level, and the crevices filled up with plaster of Paris. Over this hessian is stretched, and on this first lining paper, and then the patterned paper is pasted, the whole being finished with a coating of a peculiar varnish, wonderfully hard and wear-resisting when carpeting, of course, can be kept perfectly clean with the greatest ease, and through the wear of paper carpet may be thought fantastical, Mr. Gloyn testifies that he has had rooms carpeted with it for 16 months without showing appreciable signs of wear. There is a wide field of utility open to the use of the photographic enamel paper in many ways, for it is the most remarkable imitation of ornamental woods ever produced. It was recommended for trial.

Among other articles shown may be mentioned a cheap and handy hand printing press, the Caxton, Mr. O. B. McCallum; some pulley work, which are not very noteworthy; a new pocket telescopic and hearing steihescope, by Mr. Kempe; a working model of Davey's patent hydraulic pumping-engine, as used for draining the underlie workings in mines; an harmonograph, and various minor matters.

The Wheeler and Wilson Sewing Machine Company had a second silver medal for new arrangement; and a bronze was awarded to the "American," which can be used by the blind.

Altogether, the department of mechanics made the largest and most interesting show that had been seen at the society's exhibition for some years.

Prof. Graham Bell's marvellous instrument the Telephone was exhibited and illustrated in the presence of crowded audiences by Mr. R. N. Worth, F.G.S., curator of the society. It was awarded a first silver medal.

The Watcombe Terra Cotta Company were awarded a first silver medal for their beautiful exhibits.

Mr. RICHARD TAYLOR, F.G.S., the President, delivered his inaugural address on Tuesday in the presence of a large company. He was supported on the platform by the Bishop of Truro, Sir John St. Aubyn, Bart., M.P., Mr. Trevelyan, M.P., M. H. T. Cole, Q.C., M.P., Mr. Farr, F.R.S., Prof. M. Moissenet, and Messrs. J. P. Bennetts, T. Webber, R. R. Broad, R. N. Worth, F.G.S., E. Kitto, T. Husband, H. Hall, W. P. Dymond, W. M. Grylls, B. Kitto, F.G.S., &c.

The PRESIDENT, referring to the fact that he had been an officer of the Society from the commencement, took the opportunity of reviewing some of the work which the Polytechnic had done. In the past year of their meeting the peculiar diseases common to the mining population were referred to, and they had during the two or three succeeding years a series of able papers by Mr. Richard Lanyon on the subject, the information contained in these papers leaving a strong impression on the minds of those interested in the mines of the county, and convincing both adventurers and managers that some means ought to be adopted by which the miners might be relieved from those parts of their labour which caused the greatest injury to their health—(hear, hear)—and amongst the terrible causes of the shortness of life Mr. Lanyon pointed out the climbing of ladders. (Hear, hear.) That Society—by offers of its own premiums, and by obtaining subscriptions from many influential and wealthy inhabitants—pursued for several years experiments and enquiries; and, encouraging it by very large rewards, one of the principal and one of the deepest mines in the county adopted that which was considered to be the most perfect machine—the machine invented by Mr. Machael Loam. (Applause.) He could only appeal to those who knew the advantage and the benefits of this machine to say that by that single success the Society had won their approbation. (Hear, hear.) Mr. Lanyon in those papers referred to a second cause of injury—a very serious and dreadful cause of disease—that of beating the borer in ends or ill ventilated levels. (Hear, hear.) Mr. Lanyon classed that as second only to the injury caused by climbing the ladders. In 1843 they had a suggestion by Mr. Brunton, a very clever engineer, then residing in the county, who used what he called a wind hammer, which was the first indication of what had now become the valuable and successful instrument known as the boring machine. Having given a description of Mr. Brunton's original machine, by means of which he would, by compressed air, have a rock-boring machine which should also supply fresh air to the badly ventilated ends of the mine, the speaker said that the county had been reproached by foreigners on the tardiness that had been displayed in the matter of boring machines, it having been in use during the construction of the Mont Cenis tunnel for many years past, but in Cornwall it had but recently been adopted. In 1867 they had eight boring machines, either shown in that exhibition or illustrated by drawings, but a great part of the last 10 years passed away without boring machines being introduced. Now, however, they had at the deep mine of Dolcoath the Barrow drill, which had proved to be extremely useful and effective. The rock borers at Carn Brea, too, he was told were "performing wonders." They had in that exhibition a photograph of one of the Darlington drills, which was doing admirable work in North Wales, and was exceedingly portable. Jordan's hand-boring machine exhibited was useful, more particularly for quarries, and capable of doing the work of six men. In the early years of the Society the Natural History Department was regarded as one of very great interest and utility, but although the department was this year small, he had no doubt it was meritorious. With regard to phosphor-bronze, the speaker mentioned that M. Moissenet had analysed some specimens that had been submitted to him, and it was a very curious fact that somehow or other it produced the desired effect upon the copper, but that little of the phosphorus remained. The President then went through the various sections of the exhibition, indicating the principal points of attraction, and concluded by remarking that through the assistance given by Mr. R. N. Worth the exhibition would be rendered more interesting by the introduction of the telephone.

The Bishop of TRURO, in proposing a vote of thanks to the President, expressed the sincere pleasure it afforded him as an adopted Cornishman to take part that day in the proceedings of so useful a society.

Sir JOHN ST. AUBYN, M.P., seconded the vote, and remarked that the legislation in respect to the health of Cornish mines was in consequence of the investigations of that Society in 1833-4, when public attention was first called to this important subject. That Society kept on drawing attention to the subject until it culminated in the matter being brought before Parliament, and in 1852 a Royal Commission was nominated, of which he was a member, and the subject they had to investigate was the health not only of the mines of Cornwall, but also of England. He could fully bear out what Mr. Taylor had said with regard not only to the deplorable loss of life, and also to the shortness of life amongst miners in metalliferous mines—(hear, hear)—and this was owing to two causes. First of all, by the action of the heart caused by the ascent of the ladders from very great depths; and, secondly, the effect on the lungs of the breathing of very impure air, particularly in the close ends of the mines; and a third cause might be assigned—the prevalence of accidents more or less preventable. The Commission examined the mines all over England, Cornwall included, and the Mines Regulation Act was based upon the conclusions they arrived at, these conclusions being embodied in the Act; but some of the causes were found to be above anything that any Legislature could deal with, such as ventilation and accidents arising from men using improper borers. There was one thing, however, that had been carried into effect without the aid of Parliament, and that was the man-engine, which had done more to prolong life than any other instrument in use, and since its introduction into Cornwall 20 years ago, had been adopted by all the best mines in the county. He concluded by bearing testimony to the assistance that had been contributed by the lords of the mines, more especially by Lord Robartes. (Applause.)

THE MINERS' ASSOCIATION.

The annual general meeting of the Miners' Association of Cornwall and Devon was held on Wednesday as usual, in connection with the exhibition of the Royal Cornwall Polytechnic Society. The President (the Rev. Saltren Rogers) occupied the chair; and there were present Sir J. St. Aubyn, M.P.; Dr. Foster, Dr. Farr, Dr. Oxland; M. Moissonet; Messrs. C. Fox, W. C. Pendarves, R. Taylor, F.G.S., Warington Smyth, F.R.S., R. N. Broad, Thos. Jordan, A. K. Barnett, F.G.S., W. N. Carne, J. P. Bennetts; Capts. Bishop, Maynard, Teague, R. H. Williams, H. Rogers; Mr. J. H. Collins, F.G.S., hon. sec.; and Mr. B. Kitto, F.G.S., lecturer, &c.

The report of the council, read by Mr. COLLINS, commenced by reference to the losses sustained in the death of Messrs. R. W. Fox, G. M. Fortescue, S. Hocking, and Reginald Rogers. The chief work of the Association during the year had been educational. The several classes were in a flourishing condition, and the council proposed to continue those which sent pupils up for examination last May, together with one or two others, although they felt the grave responsibility of doing so in the low condition of their funds. About 200 papers were satisfactorily worked in last year's examination, and a very fair proportion of these placed their authors in the first class of the advanced stage in their several subjects. The die had been purchased by subscription for a Miners' Association medal to be presented to students who had actually worked under ground for at least a year, and had also passed examinations in the first class advanced stage in three of the subjects taught in the classes. This medal, it was hoped, would be claimed by more than one next year. The *Mining Journal* prizes were awarded to—Chemistry, W. Avery, Penzance; Mineralogy, J. J. Beringer, Redruth; Geology, A. T. Davies, St. Agnes; Principles of Mining, W. Thomas, Camborne. These had all taken first-class certificates. Reference was made to the admirable translation of M. Moissonet's great work on the "Rich Parts of the Lodes of Cornwall," published by Mr. J. H. Collins. Classes would be carried on at Hayle, Camborne, Pool, Redruth, St. Day, St. Agnes, Chacewater, St. Just, and Pendeen. The examination in the practical use of the blow-pipe, conducted by the Society of Arts, resulted in three candidates succeeding—Mr. B. Kitto, the lecturer, had a certificate and prize of 3*l.*; Mr. J. J. Beringer, a certificate and prize of 2*l.*; Mr. C. Beringer a certificate. The council referred with pleasure to the formation of the Mining Institute.

The LECTURER (Mr. Benedict Kitto) again reported a very prosperous year with the the classes, as shown in the lists of successful candidates at the last May examinations. "The system of sub-classes continues to work most satisfactorily. Those at Camborne and Hayle have been unusually large during the past session, while the great success of that at Penzance calls for special remark. Of the great success of that at Penzance calls for special remark. Of the five candidates in the advanced stage of chemistry from that class, all obtained first-class certificates and passed in laboratory practice, while a large proportion of the first year or elementary students were also placed in the first class. The St. Day class was suspended during last winter, but will be re-opened next month, and again taught by Mr. T. H. Letcher. The class at Beacon has been closed, owing to the teacher receiving a new appointment which required the whole of his time and attention." After noticing the remarkable success of J. J. Beringer, of Redruth, Mr. Kitto proceeded—"I am very pleased to report that a class of eight young men has been taught surface and underground surveying during the past winter by Mr. Maynard, of East Pool, and Capt Bishop, of the same mine, is now giving similar instruction to four others. Mr. Alfred T. Davies, district teacher at St. Agnes, is also teaching surveying to the members of his class. In June last the Society of Arts instituted a practical examination in the use of the blowpipe. This was taken up by several members of the classes, and three succeeded in obtaining certificates." Mr. Kitto explained that no special instruction was given for this, that the test was severe, and hoped that the offer of such prizes would be repeated annually. The drawback to this examination being largely attended would be the want of any means for remunerating teachers who devoted their time to giving the necessary instructions. The blowpipe tests for mineral substances were taught, with descriptive mineralogy, and as a preliminary to chemical analysis by the wet process. The Science and Art Department intend in future to test the knowledge of practical chemistry by students in the advanced stage by a special examination in qualitative analysis. This examination would show whether a student could actually do the work of analysis, as well as show how it should be done, and would be a most satisfactory way of putting an examination. This could only be applied in places with a good laboratory. That provided by Mr. Basset at Camborne was a great boon, and the Redruth class would work there during the coming winter.

Mr. R. TAYLOR moved the adoption of the report in in an excellent speech, in the course of he reviewed the whole of the history of the progress of mining education in Cornwall, from the date of the establishment of the Polytechnic Society, and from the effort made by Sir Charles Lemon to found a mining school. The whole of Sir Charles's efforts were then defeated, and the handsome endowment he offered lost entirely, on account of the jealousy of the mining interest, who were then afraid that their employees would know more than themselves. He had never felt so himself, and rejoiced that the Miners' Association was doing such excellent work. Mr. Taylor also referred with pleasure to the excellent translation which Mr. Collins had made of M. Moissenet's valuable paper.

M. MOISSENET seconded the motion in an admirable speech, in which he expressed his sense of the high value of the work of the Association, which was taking the lead in mining instruction, and his high opinion of the services to mining of Mr. Collins. He had recently seen in operation the Barrow and the Diamond drills at the Dolcoath and Carn Brea Mines. They were both excellent machines of different types. The Barrow was a very light portable machine, which did its work well; the Diamond was a very powerful machine—a tunnel machine in fact. His opinion was that boring machines would be of very great value in driving cross-cuts and opening up known lodes, but in dealing with new lodes by this means great care should be exercised. In the case of quick boring in such instances many indications and peculiarities in the lodes which ought to be carefully studied would be passed over. Accurate surveys were of the very highest importance, and he recommended a scale of ½ in. to 1 fathom.

M. MOISSENET proceeded to make some interesting remarks upon the lodes of the county.

The resolution having been adopted,

The PRESIDENT congratulated the society on its satisfactory working, as shown in the increased number of high-class passes gained by the students at the recent examinations, though the number of students who went in for examination was slightly less. Mr. Rogers then referred to the loss which the county and science had sustained in the death of Mr. R. W. Fox, and to the valuable work of M. Moissenet, whom they were all delighted to see present that day. He pointed out to the younger men present the manner in which M. Moissenet had worked, basing all his theories upon the dictates of experience. There was no opposition really between science and practice, but the two were absolutely necessary to each other. The President went on to show how many had worked in this field—Carne, Fox, Henwood, De la Beche, Thomas, and others, and how valuable their labours had been, and to show the peculiar value of the great work of M. Moissenet. His book was not an easy one to master, but he hoped that the younger members of the Association would endeavour to comprehend its important teachings. To assist them in this Mr. Rogers gave an interesting summary of some of the principles which were indicated by the phenomenon of lodes. M. Moissenet's conclusion was that the perpendicular portions of the lode would be found the rich portions. This was a general fact of very great importance, though it would be difficult to work it out in strata like those of Cornwall. As to the filling of the lodes, Mr. Rogers thought it was generally proved that the tin lodes were the earlier, the copper lodes next, then the lead, while iron and quartz ran through the others. This brought them to mineralogy, and it was probable that a more careful and exact study of mineralogy might help them to fuller information concerning the dates of the fillings of the lodes. Very important conclusions were to be derived from the association of minerals. Fluoric acid was commonly associated with tin, strontium appeared to be characteristic of the Permian strata. Dr. Fisher and Mr. Collins had discovered three new minerals in the past year—enysite, henwoodite, and duporthite. Thanks were heartily due to Mr. Basset for his provision of a laboratory at Camborne. The society still suffered from the difficulty of inadequate funds, and there was still a large deficit. They could do their work properly unless they were more largely supported. A society of such value ought to be provided with sufficient means.

BORING MACHINERY.—Capt. TEAGUE, jun., gave some account of the work of the rock-drill at Carn Brea. He quite agreed with what Prof. Moissenet had said about the importance of accurate surveys and workings plans. When they were driving 2 or 3 fms. only per month this might not much matter, but when they were driving 20 or 30 fms. in a month it was quite different. They were not going to have depressed times forever, and he thought the Mines Regulation Act ought to be carried out thoroughly. The drill at Carn Brea was worked by contract. The first piece of ground driven was 30 fms. 3 ft. in seven weeks. At present the drivage was 14 fms per month, against 9 to 10 ft. by hand labour: 40 fms. had been driven not only in very hard ground, and sometimes in fissured ground. Nearly 5 fms. had been driven per week in a level 8½ ft. square by machines on one stand. It only took about a quarter of an hour to run the machine back and forward. A great advantage was in the style of exploding. About 18 holes were put in at once in four to five hours, and as many as 3 ft. had been cleared at one time. The centre holes were blasted together, then those at the top, and then those at the bottom. The borers were about 2 in. He could say nothing as to cost. The owners of the drill did not wish to advertise their machine, but they would take a contract. They had 20 to 30 tons of stuff a day. The machine would never be given up at Carn Brea. In one "core" only Cornishmen were engaged at the machine.

Mr. GOFFEN, in charge of the drill, gave some additional particulars, and from his former connection with Doering's, said that the prejudices against drills were passing away. The great enemies of machine boring had been the agents, and he would not say much for the adventurers. He had to make the men forget that they were miners, and to insist that they should work while they were below. Four machines were being worked at 38 lbs. pressure, and it did not vary 2 lbs.; 60 strokes were given a minute. The receiver was at surface, and the pipes ordinarily 3-in. The pressure was the same below as above.

Capt. WILLIAMS believed that a considerable improvement had taken place in boring machines since Doering's was tried. He believed more improvement must come, and the boring machines would eventually do all the boring in these mines. He believed there was plenty of spare power in the pumping engines, which would be utilised for hydraulic boring. He believed the arrangement of four drills on one stand a right arrangement. The present depression, if it did nothing else, would teach economy. It was a great misfortune this was not seen in the palmy days of mining. The value of a mine manager's efforts must depend in common estimation upon the value of the lode he had to work. Poor mines could not enter into expensive contracts for boring.

CONTINUOUS JIGGING MACHINERY.—"On Continuous Jiggers," by Joseph Garland, F.G.S.—No branch of ore dressing deserved more careful attention, and in no branch of it had more progress been made and more ingenuity displayed during the last 20 or 30 years than in jigging. The process was said to have been introduced into the Bohemian mines in 1519. The mode was by the hand sieve, now rarely practised in Cornwall. About the end of the last century mechanical means for putting the jigger in motion were introduced. A familiar example of this was the lever or brake jigging machine, which would, doubtless, continue to be employed in small mines for a long time to come, but which eventually would become as obsolete as the hand sieve. In the fourth decade of the present century, at the Consolidated Mines, Mr. Richard Taylor applied mechanical power to jigging, the common rectangular sieve being set in motion by a water-wheel, which permitted of two or three being worked by one boy or girl. The application of mechanical power though attended with great success, had always been limited in Cornwall. In 1828 a novelty, which had brought about quite a revolution in the system of jigging, was introduced into Hungary by a mining engineer named Tutecnack. This was the use of the plunger with a fixed sieve, first introduced into Cornwall by Capt. Petherick, at Fowey Consols, in 1832. This latter jigger did not come into general use, and is now nowhere to be seen. On the Continent the piston or hydraulic jigger was in its improved form universal. It must be admitted that in the application of mechanical power on the dressing floors, completeness and perfectness of arrangements, and the adoption of automatic and continuous acting appliances were concerned, Germany was far in advance of Cornwall. Signs were, however, not wanting that in this—the only department of mining industry in which they did not take the lead—Cornishmen were becoming alive to the importance of progress. The recent introduction of Collom's and other effective jiggers gave proof of this. The typical hydraulic jigger consisted of a hutch with a rounded bottom; a square one, with funnel-shaped sides within, vertical without; or, as Collom's, altogether pyramidal or funnel-shaped. In this was placed a fixed sieve, and a plunger or piston, set in vertical motion by an eccentric or other means. This worked either directly under the sieve—the under piston jigger—or in a separate division by the side of the sieve—a side piston jigger. The latter was much preferred, as by it the ore could never impede the piston's free working.

There was no essential difference in the principle of operation between the common and the hydraulic jigger. It remained to discover a method of separating the several classes of ore and waste from each other in some self-acting and continuous way. This was effected by the continuous jigger, invented simultaneously by Vogl, of Joachimsthal, and Wimmer, of Clausthal, about 1850, since when the machine has been much improved by others. The continuous jigger was the hydraulic jigger made self-acting. It consisted of a hutch, with one, two, three, or four compartments, each with its separate sieve and piston, and each subdivided by a wooden partition extending halfway from the top downwards, the sieve being fixed in one subdivision and the piston working in the other. The stuff in the sieve in consequence of the free communication below was thus raised at every stroke to a height somewhat corresponding with the length of the stroke, and the particles in re-descending would re-arrange themselves according to their specific gravities. Since, as a rule, the ores of the metals were heavier than their gangue, it followed that at the bottom of the sieve they would eventually find a layer of pure ore (if the stuff contained any), then a mixed or dredge variety, and the waste at the top. This was the result of all jigging, but the continuous jigger had the merit of discharging each of their products continuously as formed. This was effected in various ways. In the more usual the heavier and richer portions fell into the hutch, the mesh of the sieve allowing this, while the lighter portion passed over into the next following sieve, which was set a little lower. This was repeated until at the last sieve the waste went over free from ore. In a two-compartment jigger, with a sieve mesh large enough to admit of the largest grains of ore passing through, the first compartment would receive the clean ore, the second would retain the dredge ore (carried on from the first by the water flow), and the waste would go over. For such mixed ore as galena and blende with matrix a three, if not a four, compartment jigger would be necessary to effect a complete separation in one operation. The conditions of success were—a regular feed of properly-sized stuff, a proper supply of clean running water, a proper stroke of piston, the requisite number of strokes, and a suitable kind and thickness of bed on the sieve bottom. Capt. Garland then gave in full detail, with the aid illustrative figures, a description of the various component parts of the continuous jigger.

A vote of thanks to the President was carried, on the proposal of Mr. WARINGTON SMYTH and Mr. BROAD.

STEAM TRAMCARS.—An improved locomotive for tramcars has been patented by Mr. TRUBODIN, one of the rebel generals during the American civil war, and the test upon some short tracks in Philadelphia has been so satisfactory that it is about to be thoroughly tried in Chicago, St. Louis, Baltimore, Boston, and New York. The boiler is very compact, and has large heating surface, while the engine is described as being horizontal, of marvellous simplicity, and capable of being fixed to an ordinary tramcar. In

fact, the boiler and engine pack most conveniently between the front wheels, give a few additional seats by rendering the platform unnecessary, and make scarcely any difference in the appearance of the car.

Original Correspondence.

FLAGSTAFF MINE.

SIR,—I think these shares would have a much higher value if the shareholders knew the true state of affairs, as they probably will in a few days. The directors have all returned from the mines, and will shortly favour us with their report, which I understand will be highly satisfactory. A gentleman just from Salt Lake tells me that the mine is looking better than ever. The developments in the lower levels have been extended into new ground, and opened up the finest ore ever found in the mine. These new bodies will, probably, extend up to near the surface, thus giving several hundred feet of backs above the lowest level, which will take years to exhaust, as the company is now in quite an independent position. There is no reason why these shares should remain at the present low price, for they will undoubtedly be at 10*l.* (par) before this time next year. The mine is really good, and daily improving.

A SHAREHOLDER AND MINER.

RICHMOND CONSOLIDATED MINING COMPANY.

SIR,—I see in the very full report of the meeting of this company, published in last week's Journal, that the Chairman is unable to understand the telegram. This is rather strange, for it is plain enough that the Richmond has lost the case, and the lawyers want to break it as lightly as possible to the shareholders, hence they say, "Denoting of law and facts, not settled," and they give the grain of comfort that may be gathered from their opinion "that they will win on appeal." The Rev. Mr. Probert cables—"Decision against law and facts." Can that gentleman be considered an impartial judge? He also says in same telegram—"We hold possession during prosecution of appeal." Is this reasonable? When the Eureka obtained an injunction, and the trial was to determine whether it should be a permanent injunction or not, if Richmond had gained a verdict, then the injunction would have been dissolved, and Richmond would have been left in possession. But, as Richmond has lost, the injunction is permanent, and the ground must, according to common rule, fall into the hands of the Eureka until the Supreme Court reverses the decision of the lower Court, and dissolve the injunction, which is extremely improbable.

ONE WHO KNOWS THE AMERICAN LAW.

NEW QUEBRADA COMPANY.

SIR,—At the last meeting of shareholders the Chairman and his colleagues seemed to think reticence as to the future action of the board was a great virtue, and because promises had so often been made to the shareholders which had never been realised, he seemed to think it better to say nothing at all. I confess I came away more dissatisfied than I ever felt at any of the many meetings I have attended. For ten years we have been led to expect that the moment the railway was completed all the difficulties of the company would be ended, and those doubters as to the enormous wealth of the mines be put down. When, however, we expected to hear that this moment has arrived, we have sent to us an elaborate, and, I believe, very faithful, report of the mines, which to me does not contradict the statements of the wealth of the property I have previously heard, and at the same time gives many valuable suggestions, I expected the board had called the shareholders together to discuss these, or at least to hear what the board thought, or what they had decided upon. We were dismissed, however, without one word from any official as to the future. I say one word, if I may omit the statement of the Chairman in his florid speech that whatever money was wanted they would not trouble us, but would have recourse to the good financial friends, who would find all that was necessary. Everywhere among my fellow-shareholders I hear the same complaints. Nobody knows what is being done, or about to be done: it is hinted by parties who evidently desire to depreciate the property that the ores are too poor to work. Other parties say that smelting operations are to be carried out; and each one has some private information from good sources. One thing is evident, the general body of shareholders are systematically kept in the dark by the directors. The result is seen in the present great depreciation of the shares. I consider this wholly caused by the studied silence of the board; there can be no other cause but that which I hear from every shareholder I meet—to wit, that for some reason no official information can be obtained as to what is being done at the mines. Considering that it is now seven years since the board succeeded in displacing a previous board and taking their places, mainly on the ground of their giving every information, and more quickly rendering the property productive, and now, after all that time, they have nothing to tell us, perhaps it may be worth considering whether some other men would not serve us better, even if they had not the valuable financial friends the Chairman spoke of.

Clapham, Aug. 31. E. W. R.

[For remainder of Original Correspondence see this day's Supplement.]

GOLD OF VICTORIA.—Sandhurst, which has been for some years the leading gold field, so far as yields are concerned, renders a poor account for June this year; but Ballarat and Stawell make a better return. The Ballarat Star has the following encouraging statement:—A little girl, daughter of Mr. Watson, of Sebastopol, struck a patch somewhere on the Sebastopol road. Seeing a sparkle, she picked up a piece of muddy quartz, one end of which was a mass of gold. Carrying it to her father, it was found that the quartz, weighing about 12 ozs., contained over 2 ozs. of gold. The quartz seemed inlaid with gold, and, as we have said before, one end of it was thick with the precious metal." The exact locality of the find has not been divulged. The Government Mining Department estimate the quantity of gold obtained in the colony of Victoria in the year 1876 at 963,760 ozs. The return of mining accidents in that year shows a total of 225 miners killed and injured. Of this total 55 were killed—42 Europeans and 13 Chinamen. The persons employed get fewer, and were little more than 41,000 in 1876, but the accidents have decreased faster than the miners.

SOUTH AFRICAN DIAMONDS.—It has usually been remarked that although diamonds are very plentiful in the recently-discovered fields in South Africa there is little chance of their producing any permanent effect upon the diamond market in the way of lessening the value, inasmuch as "Cape diamonds are always off-coloured, if not absolutely dirty." That the majority of Cape diamonds, and especially the larger ones, hitherto brought to this country are decidedly yellow must be acknowledged, yet that there are very many exceptions will be apparent from an inspection of a beautiful collection of these stones just acquired by Prof. Tennant of the Strand. There are upwards of 250 specimens, varying in size from, perhaps, 2 carats downward, some being so small that the value is but a few shillings, yet all are unquestionably of the purest water; indeed, equal in colour to any that have been brought from the Brazils. The crystallisation, moreover, is in many cases perfect, and all are really good stones. Prof. Tennant will, doubtless, show the collection to such readers of the Journal as may be desirous of seeing them.

ARTIFICIAL FUEL.—The invention of Mr. C. S. FOSTER, of Burton Overy Glenn, has for its object improvements in the manufacture of artificial fuel. At the present time it is usual in the manufacture of artificial fuel to employ pitch, tar, or such like material to bind together small or pulverised coal. According to his invention he can avoid the use of any such binding materials. He employs in lieu thereof a wrapper or envelope of strong coarse paper, or such like material, in which he encloses the pulverised coal in a nearly dry state. When thus enclosed he submits it to heavy pressure in a mould, and so produces a block of cubical or other suitable form The wrapper becomes so firmly attached to its contents by the pressure that it cannot afterwards be separated. The wrapper serves, to prevent any crumbling of the block in transit, and when the block is put into the furnace it prevents disintegration by the action of the heat.

PEAT FUEL—THE DODGE PROCESS.

The success achieved with the Dodge process in America has caused favourable attention to be directed to it in Ireland. Mr. Lee, who has come over from the United States as the representative of those interested in the patents, writes that he has been well received in Dublin by railroad officials and others with whom his mission brings him in communication. He finds, he writes, that the Dodge process is as much an improvement upon the methods now employed in Ireland as it is upon the many processes invented, tested, and successively abandoned in America, because of the cost of manufacturing fuel by them. Ireland, he says, is emphatically the land of peat, and he appears to consider that it is capable of being utilised. He describes the process of manufacture at present employed in Ireland as comparatively expensive, and finds that there, as in America, those interested in the question have well nigh had their patience exhausted by inventions and processes which have failed. If he can get their attention to the fact that after the works are in running order a superior article of condensed peat fuel can be produced at an expense for manufacturing not to exceed 5*s.* per ton he will have no difficulty in introducing the process in Ireland.

Already practical trials have been made for ascertaining the value of the Dodge peat, and of the coal made from it, both of which were tested in the presence of the leading manufacturers and scientific men of Ireland, with entire success. The tests were made in Ross and Murray's great Brass Foundry, Abbey-street, Dublin. The first trial was in fusing brass, and resulted as follows:—By the use of coke, the best material in use in Ireland for metallurgical purposes, brass was fused and joined in 1 minute 55 seconds. With the Dodge peat coal it was done in 1 minute 33 seconds. By the Dodge process peat in 2 minutes 12 seconds. Peat, as manufactured in Ireland, would not be used for such a purpose. The second test was in melting brass. Two crucibles were filled with equal quantities of metal and an equal quantity of coke and peat. The coke melted the metal in 33 minutes, while the peat did it in 30 minutes. The result of these tests greatly surprised the distinguished gentlemen present, and the Dodge process of condensing peat was pronounced a great success. To a country like Ireland, which abounds in immense peat deposits, these results are of great importance. The peat and the coal each stood the blasts of the furnaces, which is an important fact, as the manufacturers were fearful they would not until the matter was tested. There is little doubt that Mr. Lee is about to reap the reward in Ireland which the merit of the process he is introducing there richly deserves.

OBTAINING COLOURING MATTER FROM COAL.

During the past few years the coal tar colours have been in much favour, and various chemists have given great attention to their production. Dr. MEUSEL, of Breslau, has now invented a process according to which fossil coal, cannel, anthracite, or boghead coal are treated advantageously in fine powder with oxidising chemical compounds by ordinary or higher temperatures in suitable vessels. The most advantageous method of carrying out these improvements is to heat the different coals finely powdered with nitric acid or with potassic or sodic nitrate, and sulphuric acid. Also potassic chlorate or potassic chromate, or hypochloride of lime, or compounds of manganese, may be used for the reaction with or without an acid. By the action of nitric acid, or nitrates with acids, compounds of nitrogen with oxygen are developed, which are to be used in the manufacture of sulphuric acid or salts, containing nitrogen bound to oxygen.

Coals treated in this manner undergo a great change; a great part of the coal can now be extracted by caustic alkalis, and by ammonia or by the carbonates of soda, or potassium, or ammonia advantageously by heating the solution of alkalis with the product of the above treatment, a deep brown coloured solution and a black residue is so obtained. The black residue is a deep black covering colour which may be used for lime colour (glue colour) or oil colour, or with bone black, or instead of bone black soot or graphite. It may also be applied for the black for printing, or for blacking, and washing, painting, besprinkling, or other like purposes. The brown solution of the alkali salts may be used directly for colouring, for instance, by fluids, by soap, or otherwise. The solutions give by evaporating the alkali salts, and by decomposition with metallic salts, new salts of metals which are to be used as colours.

By the method of decomposition the salts of strontian, of barium, of magnesia, of aluminium, of manganese, of iron, of cobalt, of nickel, of zinc, of cadmium, of lead, of tin, of copper, and chromic oxide ore obtained. All these bodies are black or black brown or brown colours, which may be mixed with other colouring matters. They can be used for painting, printing, and colouring. These colours are obtained as precipitates and can be purified by water. The alkali solution can also be decomposed by the soluble metallic salts above (cotton or wool) and may so be used by the dyer. The alkali solution can also be decomposed by acids; a black brown precipitate is obtained which may be washed in water, and which may also be used as a colouring matter. This black precipitate is the acid in which the coals are partly converted by the treatment with oxidising compounds. By these means fossil coal is oxydised, and the black residue obtained by the decomposition of the oxydised fossil coal may be applied as a colouring matter to various useful purposes. The product of the oxidation of fossil coals is soluble in alkalis, and the compounds of this product of oxidation may be applied as a colouring matter to various useful purposes.

SPRING MOTORS FOR DRIVING LIGHT MACHINERY.

In constructing a motor according to the Invention of Mr. ISAAC SOLOMON, of Solomon's Island, U.S., suitable framework is used that will properly carry the mechanism attached thereto, and admit of its being attached to the machine to which it is to be applied. This framework is held together by means of rods; across the frame there is a shaft upon which is placed a series of springs, the inner ends of which are secured to the said shaft, and their outer ends to some fixed portion of the frame or machine. These springs are composed of two leaves, one of which is secured at its end as above described, while the other has lips formed upon its ends for the purpose of preventing its slipping off from the leaf upon which it is placed. The object of this second leaf is to compensate for the variations in the main leaf, or the one which is fast at its ends, and it is placed in such a position thereon that when the said main leaf commences to be wound up it shall be coiled around the shaft or drum before the compensating spring begins to be wound up. This compensating spring or leaf may be placed at any desired position upon the main leaf, so that when the said leaf uncoils to such an extent as to become weakened, or of less force than when wound up to its full extent, the said compensating leaf shall be brought into requisition, and thus compensate for such loss of power. A single spring of this character may be used, but by a plurality of springs the machine may be made more powerful.

Motion is imparted to the mechanism to be driven by means of a gear wheel placed upon the shaft to which the springs are secured, and in order that the requisite velocity may be attained the said wheel is made to mesh into a pinion upon a shaft which also carries a gear wheel larger in diameter than the pinion which drives it, and is arranged to mesh into another pinion placed upon a shaft from which a motion is communicated to the machinery to be driven, either by a belt or an additional gear wheel. Upon the last-named shaft there is placed a friction or brake wheel, upon which the brake is made to act; the said brake consists of two levers, the inner ends of which are bent in such a manner as to cause them to nearly encircle the brake wheel, which has a groove in its periphery for receiving the ends of the levers. One of the levers of this pair is pivotted to the frame at a point between the portion which rests upon the brake wheel and its long arm, while the other lever is pivotted at a point on the opposite side of the frame, so that a force applied to their outer ends shall cause them to clasp the brake wheel in such a manner as to cause the machinery to remain stationary when the operator desires it to do so. The brake is applied to the wheel by means of a coiled spring, which for convenience is enclosed in a cylinder, a rod extending therefrom to, and being connected with, the outer arm of one of the said levers, and in order that the movement of the two levers may be simultaneous, they are connected by a link or other flexible connection. For operating this brake a rod extends downward from the lower lever to such a point as to cause a stirrup attached to its lower end to be in a convenient position to have the foot of the operator placed therein; when it is desired to put the mechanism in motion a pressure upon said stirrup will disengage the inner ends of the levers from the brake wheel, and the springs will at once put the mechanism in motion, and when it is desirable to have the motion arrested, all that is required is that the foot be removed from the stirrup.

It is necessary in machines of this character that provision should be made for the holding the spring or springs in their coiled position, and for this purpose there is applied to one of the said shafts a ratchet wheel, and pawls attached to one of the gear wheels engage with this ratchet wheel, and are held in position by springs. Provision is made for winding-up the spring or springs by placing upon the spring shaft a gear wheel having upon its inner surface a clutch, which engages with a similar one on the first-named gear wheel; this clutch wheel is made to move horizontally upon its shaft, so that when it becomes necessary to wind the springs the clutch may be caused to engage the one on the shaft which carries the springs, but when not in use may be slipped outwards, and thus relieve the springs of so much labour as would be required to turn the clutch wheel and the parts connected therewith. These parts consist of a spur wheel and pinions, one of the latter being placed upon a shaft which carries upon its outer end a crank, by turning which the said pinion will cause the spur wheel to rotate, and this will give motion to another pinion and to the clutch wheel, and thus the winding-up of the spring will be effected.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Aug. 24	Minera	48	£12 1 6	Walker, Parker, & Co.
—	ditto	60	11 18 0	ditto
—	ditto	57	11 18 0	ditto
—	ditto	19	12 3 6	St. Helens Lead Co.
—	ditto	32	12 5 6	ditto
—	ditto	6	12 2 0	Walker, Parker, & Co.
27	Great Laxey	100	20 12 0	Treffry's Estate.
—	De Broke	20	11 11 0	Panther Lead Company.
30	West Tankerville	35	11 16 6	Walker, Parker, and Co.
—	Tankerville	50	12 7 0	Nevill, Druce, and Co.
—	ditto	50	12 5 0	G. Burr.

BLENDE.

Date.	Mines	Tons.	Price per ton.	Purchasers.
Aug. 24	Minera	78	£ 4 5 6	Dillwyn and Co.
—	ditto	13	4 3 0	Kenrick and Son.
—	ditto	27	4 2 6	Vivian and Sons.
—	ditto	25	4 5 6	ditto
—	ditto	27	3 13 6	Richardson and Co.
27	Pandora	35	2 6 0	Dillwyn and Co.
29	Wye Valley	40	1 11 0	ditto

ECHOES FROM THE MINING MARKET.

Owing to a slight advance in the price of tin Cornish tin shares have been in rather better demand during the week, and prices have somewhat improved. Cornish matters have, therefore, looked a trifle better. It would be, however, exceedingly premature to endorse a statement that has been made—that the upward movement in the metal, small as it is, may be regarded as the harbinger of better times. Probably it will be found to be only an important fluctuation, for at the close of the week neither Straits nor Australian look very firm in price.

Lead keeps dull, and we notice, as one of the effects of the reduced value of the metal, that Tankerville is now making quite 4*l.* per ton less for ores than some few months since when 16*l.* 2*s.* 6*d.* per ton was obtained; at the present time, however, only a little over 12*l.* per ton can be made. The mine is said to be looking rather better, but good discoveries and a better price for lead are needed before dividends can again be expected. The mine can be making very little profit, if any, at the moment. Still these are not reasons, in our opinion, for any forced sale of shares. Times may improve (and sooner or later lead is certain to go up again), and the discoveries anticipated by Captain Waters may put a very different aspect on the market value of the shares. In times of severe depression, and consequent low prices, it is seldom found the better policy to sell out of a substantial property when prices have fallen to a low figure.

Parys Mountain shares have declined upon adverse reports as to the state of the subscription list for the Morfa-du shares. Of course, unless the scheme be carried out, or some new one devised (and it must be done quickly if it is to avail Parys Mountain), the latter company must inevitably wind up. We understand that the shareholders have not come forward in anything like the number that was expected, although, of course, much must be attributed to the badness of the times, and the unwillingness of many to subscribe further money whilst the state of the market is so uncertain.

The foreign share market has been fairly supported, and a good deal of business has been done in Richmond at prices between 4 and 4¼. According to the latest reports it will be a long time before the appeal can be decided, so the shareholders may have the litigation hanging over their heads for one or two years. In the meantime speculators will play with the shares. JAMES H. CROFTS.

THE WEEK.

SATURDAY, AUGUST 25.—Business was reported in Lawe's Chemical at 7⅛; these shares at present price pay 10 per cent., and may be considered a steady investment. New Zealand Kapanga shares were rather in demand, and as few holders care to sell at the present low price a rise of 5*s.* followed, to 1⅛, 1⅛. Quebrada rose to 2¼, 2⅛, and Chicago at 2¼ to 3⅛ showed an improvement of Richmond, 4⅛ to 4⅛; Russia Copper, 1⅞ to 2⅛; Wheal Crebor, 1 to 1⅛; Cook's Kitchen has made a call of 7*s.* 6*d.* per share, and New Cook's Kitchen one of 4*s.* 6*d.* per share. Illinois Central shares are again moving upwards, to-day they rose 1½, and may go higher. British dull at 92.

MONDAY.—Money is dearer, several of the discount houses being willing to allow 1¾ for money at call. To-day saw another rise of 81½ in Central Illinois, to 82 ex div. Eberhardt shares again better, and not now to be had below 4, as against the 5¼ of last week. Lawe's Chemical, 7⅛ to 8; Andrew Knowles, 16¾ to 17¼; Ebbw Vale, 8 to 8½; John Crossley, 8¾ to 9; Langdale's Chemical, 3⅛ to 3⅝; Greenacre's Cotton, 3⅛ to 3¼. In railways Dover, A, showed weakness on the traffic return. There is a large weak "bull" account shown here, and in Brighton, A, which dearer money would play much havoc with. To-morrow commences the settlement.

TUESDAY (Contango-Day).—The rates for continuing stock were considerably higher than last time, the weak bull account having attained greater dimensions. In Caledonian it was at first attempted to exact backwardations from the sellers, but in the afternoon so much stock came forward that the rate changed to a contango of ⅜ and ½. There was a contango on York, A—a very unusual thing; this stock declined 1½, and should go much lower if valued simply at its worth. In the afternoon, unwilling to wait until Thursday, the Bank of England directors hurriedly assembled, and raised the rate to 3 per cent., and on this being known most stocks that have been supported of late by cheap money declined. Great Western made up at 101, against 104 last time, and Richmond at 4¼ instead of 5½, but New Quebrada, from 1¾, was continued to-day at 2⅛.

WEDNESDAY (Name day).—A further drop in railways. The principal sufferers to-day were Caledonian, Berwick, and Midland; the first named is now but 125½. British are still unable to rally, and now only 91½. There should be a fall to Brighton, A, and Dover, A. A telegram from the New Zealand Kapanga stating that rich gold has been struck in the winze; the shares remain 1¼ to 1⅝, but should the 5000*l.* debentures be placed, as seems very probable, a considerable rally may be looked for. Richmond rose 5*s.*, to 4⅜, 4⅝. North Laxey, ⅜ to ½. Parys Mountain, 8*s.* to 10*s.* Rookhope, 17*s.* to 19*s.* Leadhills, 5⅛ to 5¼. Palestine Bridge, 2 to 2¼. Roman Gravels, 9¾ to 9⅝. Newport Abercarn, 3 to 3⅛. Pentamtl Colliery, 4 to 4¼. Chapel House, 2¼ to 2⅜. Cardiff and Swansea, 1 to 1⅛.

THURSDAY.—A circular issued to the Parys Mountain shareholders laying stress on the necessity that exists for subscribing for shares in the new company, and reminding them of the alternative, has led to a few sales, and shares close lower. Richmond shares have been done at 4⅛, and Eberhardt at 6. North Laxey are quoted at 12*s.* 6*d.* to 15*s.*, and Rookhope 17*s.* to 19*s.* National Safe shares are lower, being dealt in at 2¼. Native Guano keep up bravely, and have been done at 3⅛. They must go higher, however, to induce shareholders to take up their unissued at 5*l.* 5*s.* Diamond Rock, 1½, 2: Milner's Safe, 7⅜ to 8¼. Lawe's Chemical, 7⅛ to 8. The shares of the St. Petersburg Waterworks Company are quoted at 4⅛, and those of Odessa, A, 5 to 5⅛.

FRIDAY (*Opening*).—Caledonian stock has been driven down heading on sale from Glasgow. At first a little business was done at 126, but in a very short space of time was vainly offered at 127. There are a great many weak operators committed for a rise here, who at present have rather an anxious time of it. If we not a Scotch line it might be asked, why it is only discovered that a million or more fresh capital will be required just as a lot of stock has changed hands at the highest point. The other markets are but little changed. Chatham preference is ⅜ better. The other markets are but little changed. Chatham preference is ⅜ better. The accounts of the Western Andes Mining Company will, it is understood, be completed in about 10 days, when the usual meeting will be summoned. The share are said to be 4 to 4¼.—*Two o'Clock.*—The markets are better. Consols are ⅛ higher. Caledonian have now offering 127. Great Eastern 130 current a week ago; but buyers are now offering 126½, as against up 10*s.*, to 47⅜. In mining shares, New Quebrada are quoted 2⅜ to 2⅝, a rise of about 10*s.* on the week. Eberhardt steady, at 6; Pary's Mountain, 7*s.* 6*d.*

...; Rockhope, 17s. to 19s.; Aberdaunant, ¾ to ⅝; Bampfylde, ¾ to ⅝; ... 2 to 2¼; East Van, 4⅛ to 5; West Chiverton, 12 to 13; Glenroy, 1 to ... Four o'Clock,—Caledonian has receded again rather considerably, now ... 128⅞ to 128¾. British down to 91. General Credit shares have been done ... and Native Guano at 4. New Zealand Kapanga, 1⅛ to 1⅜; Chapel House, ... to 2⅝; Van Consols, ¾ to ⅝; Glyn, ⅛ to ¼; Roman Gravels, 9⅜ to 9⅝.—— ... Caledonian, 125¾ to 126; British, 91⅜ to 91⅝; Native Guano, 2⅛ to 2¾.

FERDINAND R. KIRK.

London time, Aug. 31.

FOREIGN MINES.

...MOND CONSOLIDATED.—Telegram from San Francisco: Nothing de... till next week. Counsel have demanded special findings; if not allowed, ap... will be by bill of exceptions.

...W ZEALAND KAPANGA (Gold).—Telegram from Capt. James Thomas: ...(Thomandel) struck rich gold. Since last message we have crushed 30 tons ... and obtained 22 ozs. gold. Winze Albion showing gold. Men stopped. ... funds.

...NADA AND TIRITO.—Telegram from Mr. Breach: Profit for June, $760.

...TE TENT.—D. T. Hughes, Aug. 4: Have washed in South Yuba this week ... successful, similarly to the week previous, and the ground broken by our ... goes out well to the very bottom. In the Blue Lead have also commenced ... a little, and are now in a position to use much more water than we are ... obtain. All the new arrangements constructed here of late appertaining ... works very satisfactory, and without the slightest accident or detention ... the water was first turned. We are in hopes to have water enough without ... along with the South Yuba to make a little run here before setting off ... that, which we shall postpone until all the available ground is washed, and ... thing will improve the chances for the blast, and the washing probably will ... a profitable result, which will help pay a portion of the expenses incurred ... opening up this claim. We expect to have a good supply of water until the ... of this month.

...Telegram from Prof. Price: Partial clean up, $11,500.

...ERENTINE.—Capt. Coward, July 12: Mines: Pique: In the cross cut west ... bottom of shaft, referred to in my letter of the 25th ult., after driving 6 ft. ... junction, the western part of the lode was intersected, which at once drained ... water from the stope in the bottom of the 44. The cross-cut has been ex... and west on the lode about 3 fms., and we are not sure that more lode does not ... further ahead, because it still is letting out water. The lode for the 3 fms. ... found to is composed principally of lead ore and a small proportion of pyrites. ... Whenever the cross-cut is stopped for want of timber, and the shaftmen are put ... to it, breaking ore in the bottom of the 44. On the 6th, in back of the 44 north ... (?) was cut in the back of level, through which a strong current of air was ... thereby proving that it had connection with the Cano Largo, or another ... however, the existence of which we are not aware of. Since the 6th the end ... been driven about 2 ft. farther, and there is now a lode of red ore in the back ... 18 in. wide, with every appearance of going larger, and wind still playing ... south.—Captain Section: 20 cross-cut east: Good progress has been made dur... this last month, and in about a month more the lode should be cut. All the ... appearances are without change to notice.

...Reports of Mines, and Prospects, &c.: The course of ore in the bottom of the 44 fm. ... to north shows every sign of continuation for quantity and quality. The course ... ore in the shaft, and to the west-ra part of it, is the same. The 44 fm. level ... that was the ore apparently of making a most important discovery. The 20 fm. ... cross-cut, east from Captain shaft, in about a month more should cut the im... course of ore gone down in the bottom of the adit level. We have at least ... tons of red and pyrites ore more in the No. 2 cano to come away as soon as ... can be had to secure the ground, and we have very close upon 1000 tons of ... and red ores at surface and underground ready to be put to the stamps for ... finish.

...NITED MEXICAN.—Advices from Mr. E. Hay, dated Guanaxuato, July 24: ... of San Cayetano: Mines of San Antonio and San Cayetano-de la-Ovejera: ... the end of last week the pozo of San Benito communicated with some old ... level of San Cayetano that are filled up with attle (rubbish), through which ... planned to make a passage. We have driven in two weeks to July 21 5·30; total ... 16·13 metres. In order to get away from the hard rock against the lower ... of the lode in Los Angeles we have made a curve to the north of it. The ... is still coming out with force, and the exploratory hole is now 1½ metre in ... bottom of the end. In the two weeks ending July 21 we have driven 2·85; total ... have driven, 21·35 metres. We have not yet got the necessary information about ... Angeles, towards which a cross-cut must be driven; however, this work will be ... soon, starting from Los Angeles, where the lode we have traversed com... found to be so very hard. The water in the shaft has gone down in two weeks ... July 21 0·76 metre: total distance, 14·58 metres. We have driven in San ... Jose in the two weeks to July 21 5·90 metres; total distance 101·20 metres. ... San Juan the cross-cut to the south of the shaft of San Agustin the work goes ... slowly, as we have only driven in the two weeks to July 21 1 metre; total dis... driven, 2·35 metres.

...ALMA.—The report from Frias (for June) shows a loss of 412*l.* 16s. 10d. The ... manager, whilst explaining that the month's returns would present a much ... favourable aspect were it not that all the ore requiring treatment had had to ... added from the invoice, owing to the crushing machinery being still in pro... of transformation (from the old to the new system), says: I am happy to ... you now that in the 20 fm. level cross-cut we have cut a fine lode, which ... in very rich mineral; it corresponds to the lode we are working in the ... shaft. We have already started a cross-cut to try it in the 30 fm. level; ... it prove as good as in the 20 we shall be able to count on a fine reserve of ... mineral.

...EXTER CONSOLIDATED.—G. P. Armstrong, Aug. 1: In the 40 sacks of ore ... tons) shipped to Salt Lake an error has been found in the assays, and the ... of the same, as corrected, will be about 254 ozs. silver per ton. This ore is ... Crown Point. We shipped to day, *via* railroad, for Salt Lake 170 sacks ... which will average not less than 175 ozs. per ton. We have been making ... of ore on the different dumps of 1 to 20 ton lots, with the following result—

Mine.	Locality.	Lead—per cent.	Silver—ozs.
Crown Point	Lower level	25	158·9
Ditto	Ditto	19	254·8
Ditto	Upper tunnel	26	16 50
Ditto	Ditto	4	40
Ditto	Lower tunnel	36	36
Ditto	Lower level	20	235·50
Ditto	Ditto	20	175
Yuma	Dump	24	15·9
Copperhead	Ditto	18	26
Lookout	Ditto	15	106·50
Crown Point	Lower tunnel	15	80

...Mine: The Lookout is showing better, the limited quantity extracted ... very well; have driven the tunnel 50 ft., and are now sinking on a small ... of ore, which is 4 or 5 ft. wide and 1 ft. thick, and seems to be getting larger.

...ALABAR.—G. B. O'Reilly, July 19: The Mine. I have given tolerably full ... under this head in my late letters, and have at present but little to add ... there communicate. The ground has pretty much the same appearance, ... have still to employ a large body of men to keep the dead work ahead as ... possible of our washing: this is no easy matter, as the board will clearly ... on reference to the rough section of our bank sent Mr. Pechey last mail, ... have before argued, our true interest is to work as we are now doing, and ... quicker returns. From June 30 to July 10 we ran 191 hours: on the latter ... rather serious slide took place on the ditch (the first we have ever expe... and some flume was carried away, and our washing totally suspended for ... days, a delay I very much regret, but which no precaution of ours could have ... Since then we have been washing with tolerable regularity, and I still ... make a clean up in time for the mail of the 30th inst.

...N PEDRO.—J. Phillips, July 15: The cross-cut in the 65 has been driven ... through the manto about 8 metres, and for all the distance driven the manto is ... impregnated with stones and spots of rich yellow ore, but not in sufficient quan... to value. The manto in this level is less mixed with black spar and mundic ... in the level above, and the ore is cleaner and of superior quality. As far as ... have driven the manto is compact and well formed, and I think from the ap... of the same we ought to meet with good ore ground in exploring ... through it. A few days ago we started two ends at right angles to the main cross... one south of east and the other north of west, in order to prove the manto on ... side, and on both of these ends within the last three days we have met with ... patches stones of yellow bronze. These ends are looking very promising. I ... great faith in the end driving south of east, as it will go in under the low ... ore ground (with mundic) that we met with in the 150, and as the ore we ... met with in this (165 fms.) level is almost free from mundic, and is of good ... quality, I hope that when we get under the said poor ore ground we shall find ... good ore, and in quantity.

...In the 30 the winze sinking through the manto in bottom of this level is much ... the same as when last reported—still yielding stones of ore, but not to value; this ... winze is now down 15 metres. The cross-cut driving towards the manto verde is ... the widest at present, as the men who were working here have been put into the ... to drive one of the ends across the manto, as I cannot now employ more men; ... soon as we cut any ore of value in the bottom we shall continue this cross-cut ... towards the manto verde. In the 135 we have now two men working here on ... tribute, who pay 20 per cent clear to the mine; this yields small quantities of ... to 17 per cent. ore. In the 88 and 47 the tribute pitches are producing small ... parcels of 35 per cent. ore. The stope by the side of old works a few metres ... from surface is yielding 2¾ tons of 20 per cent. ore per fathom, but is getting very ... poor. The pitch in Manto Verde has been stopped, as it would no longer pay ... to open to work. The coming water is now about 2500 gallons daily, and diminish... ...Santa Elena: We have some tributers in this mine picking over the des... parties. Everything at surface and underground is working well.

...PORTUNA.—Aug. 29: Canada Incosa: The lode in the 120, west of O'Shea's ... cross-shaft, is becoming more settled, and yields occasional stones of lead ore. ... the 110, west of Judd's, has entirely fallen off in value during the past few days. ... in the 60, east of San Carlo's shaft, good progress is being made, but nothing of ... value has yet been met with. The 40, west of Abercrombie shaft, produces ⅜ ton ... of ore per fathom. The 50, west of the same shaft, is slightly improving, now ... yielding 1 ton of ore per fathom. The lode in the 60, west of San Pedro's shaft, ... is split into several valueless branches. In the 70, west of the same shaft, the lode ... is large, and spotted with lead ore. The same level east produces 1 ton of ore per ... fathom. The 120, east of O'Shea's engine-shaft, is easier for driving, but the lode ... is still poor. The lode in the 110, east of Addis's, is small and poor, and the ... ground hard. In the 90, west of Kennedy's, the lode is large and open, but with... out value. The 100, west of Lowndes' shaft, is being driven through a hard ... piece of ground. The same level east yields ½ ton of ore per fathom. The 90, east ... of San Carlo's, produces good stones of ore in the bottom of the level, but the upper ... part is poor. The 80, east of San Tomas shaft, is poor. In sinking San Pedro's ... shaft, below the 70, fair progress is being made. Powier's winze, below the 5, is ... in hard ground, and the ventilation bad, consequently little is being done. Rita's ... winze, below the 100, yields ¾ ton of ore per fathom. Laborde's winze is opening ... in hard ground, worth 1 ton of ore per fathom. Christino's winze, below the 90, ... yields ½ ton of ore per fathom.

...Los Balidos: The 130, west of Buenos Amigos engine-shaft, is poor. The 120, ... west of this shaft, yields ⅛ ton of ore per fathom. In the same level east there is ... scarcely any lode to trace. The 130, west of Morris's shaft, continues unproduc... tive. The 110 east is improving in appearance, and yields ¾ ton of ore per fathom. ... The 120, east of Cox's shaft, is opening splendid ground, worth 3 tons of ore per ... fathom. The 110, east of San Miguel's shaft, produces 1 ton of ore per fathom. ... The 90, west of Swaffield's shaft, is also worth 1 ton per fathom. The lode in the ... 80, west of this shaft, is small and unproductive, and the ground hard. In the 65, ... west of Palgrave's shaft, water is issuing from the end, but no change for the better has taken place. The driving of the 35, east of this shaft, is resumed east of Rosa's winze; the lode contains good spots of ore. The 65, east of Palgrave's, has fallen off in value considerably. Alvarez' winze, below the 120, continues poor. In Mimbre's winze, below the 100, the lode is poor, and the ground very hard and wet. Saliente's winze, below the 100, has improved in value, but the ground is exceedingly hard; present value 1 ton per fathom. Ramo's winze, below the 55, is worth 1 ton per fathom.

ALAMILLOS.—Aug. 22: The lode in the 40, west of San Felipe's shaft, yields a little ore, but not enough to value. In the 20, west of this shaft, the lode is worth ⅛ ton of ore per fathom. The 25, west of Abercrombie's shaft, has a better appearance, and is producing ⅛ ton of ore per fathom. The lode in the 40, west of the same shaft, is easy for driving, and is worth ⅛ ton per fathom. The 100, east of Taylor's shaft, is also valued at ⅛ ton of ore per fathom. In the 100, west of Taylor's shaft, the lode is large, but of no value at present. The 85, west of Adriano's shaft, yields a little ore. The lode in the 60, east of San Victor's shaft, is somewhat larger, but still without ore. The same level west yields 1 ton of ore per fathom. The 40, west of San Carlos shaft, produces ⅛ ton of ore per fathom. In the 30, east of San Jose's shaft, the granite is not so easy for driving through. The lode in the 40, east of Judd's engine-shaft, is opening ground worth 1 ton of ore per fathom. In the 50, driving in the same direction, the lode has a better appearance, and is yielding a little lead ore. The 70, west of this shaft, is without change. The 50, east of Judd's cross-cut, is being driven off the lode, and in hard granite. The 50, west of Sanchez' winze, has fallen off in value to ⅛ ton per fathom. In San Victor's shaft a drawing left has been fixed at the 60, and better progress will now be made. The lode in Temateo's winze below the 15 is at present of no value.

LANESTOSA.—Aug. 23: Angel's winze, below Guillermo's shaft, shows nothing but clay bands in marly shale. The 50 metre level, south of Guillermo's shaft, is in barren siliceous rock. The drivages on the lode in the cross-cut, west of this shaft, are composed chiefly of siliceous stone and clay, with a few spots of lead ore. La Cruz deep adit north continues in black carbonaceous shale, with strings of blende through it. Soldado's winze, below deep adit, yields good rocks of calamine, blende, and lead ores, mixed in a large lode, and looks very promising.

LINARES.—Aug. 22: Pozo Ancho: In the 120, east of San Tomas engine shaft, the lode is large, and contains spots of lead, but nothing to value. The 100, east of Warne's shaft, yields ¾ ton of ore per fathom. In the same level west the lode is small and unproductive. The 120 cross-cut, south of Peill's shaft, is in very hard ground. The 105, west of Peill's, is opening ground worth 2 tons of ore per fathom. The 90, west of this shaft, is also producing 2 tons of ore per fathom. The 65, west of Peill's, continues without improvement. The 105 east yields 1 ton of ore per fathom. The lode in the 90, east of San Francisco shaft, consists of carbonate of lime and lead ore, of the latter 1 ton per fathom. In the 75, east of this shaft, there is nothing to value. The 65 east continues unproductive. Good progress is being made in San Tomas engine-shaft, sinking below the 120. Warne's shaft, below the 100, is yielding 2 tons of ore per fathom. The lode in No. 221 winze, below the 90, is split into branches, and is not so productive as it was; value 1 ton per fathom.—Quinientos Mine: The driving of the 100 fm. level cross-cut, south of Taylor's shaft, goes on well. The 90, west of Taylor's shaft, is in hard ground. In the 80, west of this shaft, the lode contains ore, but not in a sufficient quantity to value. The 90, east of Taylor's, has passed through a good shoot of ore, but at present is poor. The lode in the 80, east of Addis's shaft, is composed of carbonate of lime and quartz. The 80, west of San Carlos shaft, is favourable for driving, but quite poor. The same level east contains stones of ore, but not to value. The 65, east of Judd's, is unproductive. The 45, in the same direction, is in hard ground. Dona's winze is down the necessary depth for the 90. Facundo's winze, below the 65, yields 1 ton of ore per fathom. Arno's winze, below the 55, is worth ½ ton of ore per fathom.

PESTARENA UNITED.—T. Roberts, Aug. 24: District Val Toppa: The lode in end sunk of No. 3 cross-cut, in the western part of the great quartz lode, is not looking so well, yielding at present about 2 tons of ore per fathom; worth, as per last mill trial, 2 dwts. 7 grs. of sponge gold per ton; and per assay, 4 dwts. 2 grs. of fine gold, and 1 dwt. 19 grs. of fine silver per ton. Behind this end we have commenced a new stope in back, productag about 8 tons to the fathom, worth on an average 10 dwts. per ton. The intermediate level below Zero lode, in the end south, is small, yielding about 1 ton to the fathom. The end driving north continues to open up productive ground, of about 5 tons to the fathom; worth 1 oz. of gold per ton. The lode in the rise, in No. 1 level, is much the same, yielding about 1 ton of ½ oz. ore per fathom.—Great Quartz Lode: The drive in north end of ground under No. 2 level continues to yield 10 tons to the fathom; worth 5 dwts. per ton.—Marmo Rosso Lode: The lode in the end driving south of No. 1 cross cut east is small, yielding about ½ ton of low-class ore per fathom.—Flat and New Lodes: The end south in Zero level, on the caunter branch, continues to produce stones of ore. A mill trial of the same gave 17 ozs. of sponge gold per ton, and the assay show it to contain 15½ grs. of fine gold and 1 dwt. 23 grs. of fine silver per ton. In No. 3 level the lode in the end north is much the same, about 3 ft. wide, of a promising appearance.—Lode and branches east of new lode: In the new drivages north and south of No. 4 cross cut, in No. 2 level, on a flat lode, nothing of value has yet been met with. No change in the No. 4 cross-cut east in No. 2 level; neither is there in the cross-cut westward in No. 5 level.—Stopes: The siopes in bottom behind the intermediate level under Zero, on the western lode, have further fallen off in value; all other stopes are much the same as was reported on the 7th.—Surface: Fair progress is being made at the mine on the road leading to the wire incline terminus, and the erection of the lower half of the wire line is progressing.—District Pestarena: Good progress is being made on the walls and roof of new mill building. All the underground points in operation continue much the same as when reported on the 7th inst.

LUSITANIAN.—Aug. 21: Palhal: In sinking Taylor's engine-shaft below the 200 the lode is worth 4 tons per fm. In the 50 cross-cut, north of Perez' shaft, there is no more lode in the end, and the ground is hard. The lode is small in No. 108 winze, below the 150, west of slide, and unproductive. In No. 107 winze, below the 180, west of Taylor's, on the south part, the lode is worth ¾ ton per fm.—Levels on Basto's Lode: The lode in the 200, east of Taylor's, is worth 1 ton per fathom. In the 200, west of Taylor's, the lode has improved, being worth 1 ton per fathom. The worth of the lode in the 190, west of Taylor's, is 2 tons per fm. In the 180, west of Taylor's, north part, the lode is small, and very much out of place in its bearing. The lode is small in the 160, west of Taylor's north part, and unproductive. In the 150, west of Taylor's, and west of slide, the lode is small, but contains spots of ore. The lode is 1 ft. wide in the 90, east of River shaft, and composed of soft quartz and flookan. In the 70, east of River shaft, the lode is 1½ ft. wide, composed of flookan and country, with spots of lead. The lode in the 50, east of River shaft, is 4 ft. wide, composed of quartz and country—poor.—Carvalhal: The lode in the 30, north of great lode, west of incline shaft, on the north and south lode, is from 8 to 12 in. wide, composed of mundic, faces of lead, and good stones of blende.

BRITTANY MINERALS (St. Brieuc, France).—J. Edwards, Aug. 25: There is no change worthy of remark in the sump sinking below the 70 or in the 70 end driving south since last report; each of these points are yielding good dressing work for silver-lead. The ground sunk in the engine-shaft during the past week is 2 ft. 6 in. The ground driven in the 70 end south during the past week is 4 ft. The lodes in Nos. 1 and 2 stopes in the back of this level are worth respectively 10*l.* and 20*l.* per fathom for silver-lead ore. We shall commence to sink a winze in the bottom of the 70 next week in a good lode of ore. We shall then further increase our returns. All the machinery is in good order, and working well. Ore ra sed since last report 10 tons.

VIRNEBERG (Copper).—Capt. R. K. Roskilley, Aug. 27: I was underground to-day, and am pleased to inform you that a little south of the rise, in the back of the 90, and about 5 lachters above the level, we have discovered a splendid lode of copper ore: worth, as seen at present, fully 30*l.* per lachter. To give you an idea of what it is like, we broke out of it 5 cwts. of copper ore in half an hour, and sent it to surface, a box containing stones of which I will send you to-morrow. I shall put three men here at once so as to clear away the deads and prepare it for stoping; by the end of this week I hope to have it cleared, and a good pile of copper ore drawn to surface from this point alone.

— Capt. R. K. Roskilley, Aug. 28: Engine-Shaft: The 110 lachter cross-cut is driven west of level 4 lachters, and as we appear to be through the lode in this direction, we are now engaged in driving north on its course, which is yielding some very fine copper ore, worth about 10*l.* per lachter. We have also two men in this level engaged in cutting in the side of the level so as to commence a rise in the back, in order to communicate with the winze sinking below the 100. The 100 winze is sunk below the level 2 lachters 4-10ths; the lode here is large and masterly, and yielding stones of copper ore. The lode in the rise in back of this level is worth for copper 12*l.* per fathom—a very promising lode; this rise is above the level about 1 lachter 8-10ths. The retimbering of the rise in back of the 90 is completed, and the men are clearing away the deads 5 lachters above the level, so as to see more of the lode we discovered and reported on yesterday, and prepare it for stoping. The discovery is of great value to this property, being worth fully 30*l.* per lachter; in fact, the copper is so rich that we are compelled to send it to the surface in sacks.

LANZI.—John Boyns, Aug. 9: We have shipped 408 tons of ore to Swansea.

— Aug. 13: No. 1 back stope is in good mineral ground. No. 2 stope is in paying ground. No. 3 stope is in paying ground. No. 2 side and bottom stope is in good mineral ground. No. 5 sink in the bottom of the lead quarry is in paying ground. There were 10 tons of packed ore put to pile last week.—King's Lode: The shaft tackle is fixed, and we are now waiting for the sheeves to finish it up.

— Aug. 17: The company did at the beginning employ men to break up the rocks for the contractors, but now we have taught the men to break up the rocks themselves, and by this plan of stoping the ground we save over 40 per cent., and as we open the mine by these stopes we shall make a much greater saving in breaking the ore away of over 50 per cent., and make room to employ more men, when we shall be able to raise double, and even three times, the quantity of ore in the same time. In mining time is money, and I hope in three or four months or less to cut the lode through from the 13 fm. level to the lead quarry at surface; at the same time we shall be sinking under the 13 fm. level, and I hope to commence it next week, and every fathom we sink in mineral ground is making the mine more valuable, and the same men will be breaking double the quantity of orestuff in the same time. The No. 3 pile of ore is now about 600 tons. We are dressing No. 1, 2, and 4 quality ore for the market in the same way as before.

MINING IN AUSTRALASIA—MONTHLY SUMMARY.

The Chief Warden of Gold Fields at the Northern Territory has reported that the mining prospects are much more favourable than on any former occasion. Coolies were receiving 10*l.* a month. He recommends the introduction of 100 more coolies from Singapore. The largest nugget hitherto found weighed 61 ozs. 11 dwts.

The estimated cost of the intended railway from Port Augusta northward to Willochra—a distance of 39 miles—is 201,763*l.*, including land, stations, rolling-stock, &c.

COLONIAL PRECIOUS STONES.—Mr. Julius Schomburg has shown us some beautiful specimens of obsidian—a stone very much like but greatly superior in appearance to the sapphire, and found in the north and other parts of the colony. The specimens were sent in the rough to a lapidary in Melbourne, who polished them, and speaks very highly of their quality. The colour is a rich, clear, brilliant blue, and the stone is so hard that it will cut glass.

The season continues very favourable. The early rains and intervening warm weather have been so very conducive to vegetation as to produce an unusual abundance of feed in the pastoral districts, whilst the wheat is also healthy, and in some districts very forward for the time of year. A very large area is under cultivation.—*South Australian Register*, July 12.

A letter has been received by the Government with respect to a new and cheap system of ocean telegraphy. The communication stated that it was proposed to lay a cable on this new system from England to America, and if successful the contractors would be willing to lay a cable to Perth, Western Australia, if subsidised by the Imperial and Colonial Governments.

The Government are calling for tenders for the construction of a railway 200 miles north of Port Augusta. The tenders are to be in by October next.

It is stated that the Chinese question is assuming a phase that is important to New South Wales. A Chinese firm is about to get 5000 Chinamen from Cook town to work the tin mines near the boundary of Queensland and New South Wales.

There is promise of a very prosperous season, and we shall probably reap the largest harvest ever gathered in South Australia, and the wool clip will be heavy and of good quality. We have had copious rains every month, including the present, since January, and this is altogether without precedent in our meteorological history since the foundation of the colony.—*South Australian Advertiser*, July 12.

AUSTRALIAN MINES.

BURRA BURRA.—Capt. Sanders, July 9: We are making rapid progress in sinking Morphett's engine-shaft; nearly 3 fathoms have been sunk during the past month, and the shaft is now down 10¼ fms. below the 85. Should present favourable ground continue we shall in less than three months be down to the 100. The 85 south, on Sanders' lode, has been extended during the past month, and we have cross-cut the lode, which is 12 ft. wide, with two good walls, composed of a gossany quartz, with spots of yellow, purple, and grey sulphurets, and pockets of a soft black oxide of copper; the last few feet of the driving has been poor, but the lode is improving again. The 85 north, on Kingston's lode, has been extended during the same period 3½ fms., and we have cross-cut the lode to 18 ft. wide, but no footwall has yet been met with; this lode is composed of a very light coloured quartz; the main or leading parts are of a soft sandy quartz and flookan, about 2 ft. wide, on the hanging part of which is the ore bearing part from 2 to 3 ft. wide. In driving the last 3 fms. of this portion of the lode we have broken some very rich purple and yellow ore, and have taken out pieces of nearly solid ore weighing ½ cwt.; this was chiefly in the bottom part of the drive, but at present it reaches to and leaves ore in the roof. I estimate the lode to yield from 1 ton to 25 cwts. of 30 per cent. ore per fathom; driving at 12*l.* per fathom. There is no noticeable change at the 60, Peacock's air shaft, the men having been engaged in weighing ore and other necessary work. The open work and dressing are being pushed on with all possible dispatch, and are yielding about the usual quantities of ore. In the old pitches the men are working with a will, and judging from the ore coming up I think several pares will do pretty well.

PORT PHILLIP AND COLONIAL (Gold).—The directors have received the following advices dated Clunes, July 7 last:—Quantity of quartz crushed on the company's and tributers' accounts for the four weeks ending June 20, 5172 tons; total gold obtained, 2088 ozs. 5 dwts. 12 grs.; receipts (including 201*l.* 9s. 7d. obtained from tributers), 4588*l.* 4s. 3d.; payments, 2530*l.* 9s. 2d.; profit, 2057*l.* 15s. 1d., which, added to previous balance of 1759*l.* 17s. 11d., made an available balance of 3817*l.* 13s. The amount divided between the two companies was 2500*l.*, the Port Phillip Company's proportion of which is 1625*l.* The balance (1317*l.* 13s.) was carried forward to next month's account. Remittance, 1600*l.*

— Aug. 24: Mon h ending August 15. Telegram: "Gold obtained from the company's quartz, 409 ozs. Gold obtained from tributers' quartz, 1626 ozs. Profit, 1200*l.* Remittance, 800*l.*"

SCOTTISH AUSTRALIAN.—The directors have advices from Sydney dated July 7, with reports from the Lambton Colliery to the 5th. The sales of coal for the month of June amounted to 13,165 tons, making a total for the half year ending at the 30th of that month of 79,266 tons.

YORKE PENINSULA.—The directors have advices from the committee of inspection at Adelaide, dated July 11, with reports from the Kurilla Mine to July 9. The Kurilla Lode: At the 45, east of Hall's shaft, the orebearing part of the lode has fluctuated in size during the month from a mere film to nearly 4 ft., and in value from worthless to 80*l.* per fathom, but on the whole it has been good tribute ground, and it is still holding good, and with every prospect of continuing. The hauling-shaft is holed to the 45. I shall begin to-morrow to wind through it from the 45 direct to the surface. At the 45, west of Hall's shaft, the lode is gradually improving, and is now producing dredge ore that will be laid by for dressing by crushing and jigging. This drive is now 20 fms. away from Hall's, and 12 fms. from Deebles' shaft. On this lode 15 men are working on tribute at 8s. 6d. in 1*l.*—Morphett's Lode: The shaft is now down about 6½ fathoms below the 20, sinking by nine men. The lode continues to yield well, equal to 7 tons of 17 per cent ore per fathom. At the 20 east another crossing has been met with, which further disordered the lode. It is now worth 1½ ton of 20 per cent. ore per fm. At the 20 west I have had two men stripping down the south side of the drive and driving towards the north. The lode is of great width, but it is split into small veins, neither of which is wide enough to pay. It now appears that the main part of the lode is hove north by a slide, and I shall drive west on it. Two men are sinking a winze from the 10 west. Seven men are working on tribute on this lode at an average of 6s. 8d. in 1*l.*—Ore Returns: On hand, dressed and undressed, 55 tons of 17 per cent. ore, or (say) 3000*l.*; dredge ore, 360 tons of 5 per cent., 720*l.* = 3720*l.* Every step we take only adds to the evidence already adduced, that we have so good a property that nothing is wanted to bring it into a permanent, profitable condition but to vigorously follow what is already discovered with proper appliances. Even now few progressive mines can sustain such an excessive proportion of purely exploratory work to the tribute work, and so nearly meet the cost of working at the present very low price of copper, and could we only extend those works with the energy the case demands our highest hopes would eventually be realised.

BON ACCORD.—The directors of the Yorke Peninsula Company have received by the mail the following report (with a relative plan) by the resident manager of the Burra Burra Mine on this property:—

Burra Burra Mine, July 10.—I beg to forward you plan of the Bon Accord property, with the lodes and workings of the Burra Burra Mine in connection therewith. I would particularly call your attention to the position and bearing of the lodes as proved in length and depth in the Burra Burra Mine. Kingston's and Sander's lodes have been proved to continue in the Burra Burra from A to B, and Tinline's lode from C to D. Up to and beyond your boundary Kingston's lode can be plainly seen at A in the Bon Accord, and then as shifted to the east 23 fms. to B, and Tinline's can be plainly seen there at C, and I feel no doubt that these lodes will be found at or near where laid down on the plan, except that beyond the creek; I believe the back of a cross-course will shift the lodes to the east. In the longitudinal section of the Burra Burra Mine you will perceive that Morphet's shaft is nearly down to the 100 fm. level. Very little ore was found above the 70 in that direction, but below that purple and yellow sulphurets, while in the Great Deposit ore in the shape of carbonates and oxides was found close up to the surface. This shows plainly that such rich surface deposit at the Burra Burra was caused by the influence of cross-courses intersecting the lodes, combined with volcanic action, causing a lateral shifting of the lodes to the west, and carrying the ore in a state of solution towards the surface, where, coming in contact with the rock and sand containing from 60 to 70 per cent. of lime, it was deposited in the shape of carbonates and oxides. Taking this theory as correct, it would be reasonable to expect that the lodes from which the copper had been carried up would be found impoverished in length and depth within the influence of the volcanic action supposed. Hence the ore being found to lie deep at the south end of the Burra Burra property, and we may reasonably expect the same to be the case northwards in the Bon Accord, so that I see nothing discouraging in payable lodes not having been found at the depth of the workings executed on the Bon Accord. I believe that if the workings on the Bon Accord were sunk 30 fms. deeper as good results would be attained as at the 100 fm. level at the Burra Burra. My advice is the same as given in my report in 1874.—R. SANDERS.

STEAM MOTOR ENGINE.—The invention of Mr. F. DE C. PINTO, of Kennington-road, relates to steam or other fluid motor engines in which a reciprocating piston gives rotation to a crank, or to pumps in which a rotating crank or eccentric gives reciprocating motion to a piston or bucket, and has for its object the simplification of the connection from the piston to the crank or eccentric. He joints directly to the piston a connecting rod which passes through a rocking and sliding joint in the cylinder cover, and is jointed to the crank. The joint on the cylinder cover is packed so as to be tight against the leakage of fluid. As the crank revolves and the piston reciprocates the connecting rod moves through the joint, taking at the same time the inclination and deviation from the axial line required by the circular movement of the crank, and permitted by the rocking and sliding joint on the cylinder cover. The piston may be guided by rods passing through the covers so as to diminish the lateral strain, or the piston itself may be made of more than the usual depth for the purpose of steadying it against the lateral strain, and increasing the rubbing surface.

STEAM-ENGINES.—The use of the steam-jacket in connection with the cylinders of steam-engines, and the advantages attendant thereupon, are well known, but the diagrams taken by the dynamometer show that a large amount of condensation still takes place, a portion of the condensed steam in the cylinder is evaporated anew during the expansion, and another very important portion is also evaporated, but by taking the heat from the surrounding parts of the engine, thus causing a rapid cooling of such parts. Those parts which are immediately surrounded by the steam-jacket are instantly reheated, but those parts which are not so surrounded, such for instance as the piston and rod, are relatively cold on the arrival of the steam in the cylinder, and they therefore condense a large portion of it before they arrive at the same temperature as the steam which flows in. The object of the invention of Madame VEUVE ANDRE, of Thann, Alsatia, is to avoid this latter condensation such object being attained by forming the piston and piston rod hollow, the spaces in the two parts being made to communicate with each other. Steam is introduced into the piston and rod through a pipe, which is attached to the piston and passes through a stuffing box in the end of the cylinder. This pipe slides in a steam supply pipe which is provided with a stuffing box, and has an inlet for the admission of steam, and an outlet for the condensed steam. The outlet may communicate with a pump to draw off the condensed steam.

HOLLOWAY'S PILLS.—Worthy of Especial Note.—These purifying pills exceed every other medicine for regulating the digestion, acting healthfully on the liver and bowels, invigorating the nervous system, and strengthening the body. They cause neither pain nor other inconvenience. In hot seasons the system is liable to sudden checks. In such cases these pills restore the balance of the circulation, and ward off dangerous attacks of diarrhœa, dysentery, and cholera. They are the best correctives of the stomach, when disordered by repletion or by the presence of indigestible food. They speedily rectify the flatulent weight and general uneasiness which are experienced in the bowels prior to the accession of more serious symptoms, which debilitate, if they do not endanger.

WATSON BROTHERS' MINING CIRCULAR.

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.,
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

PARYS MOUNTAIN.—We are informed that the shareholders here have not applied for shares in Morfa Du to the extent expected of them: we are reminded also that a week or two ago we said that a project was on foot to take up all the shares not applied for, and this may have deterred a few persons from subscribing for their proportions—that is to say, the shareholders in Parys Mountain are ready to believe that if Morfa Du is taken up, Parys shares will reach 30s. per share, or perhaps more; but the apathetic indifference to all trouble and speculation, now so rife, has also seized them, and they are ready to take the benefit of such a rise in value without contributing anything towards it. But this apathy *may lose them their property altogether*, and a circular from the directors has been sent to them notifying this fact. If Morfa Du shares are *not* taken up, Parys Mountain will stop for want of capital just on the eve of success, the company will be wound-up, and the whole property sold, perhaps, for a tenth part of its value—*to those who have for some time been looking out for such a result*—in order to buy it at their own price, form a new company altogether, and reap the reward of an outlay of over 40,000*l.* In this case the present shareholders would *lose all*. It was to prevent this, and to preserve the property, that we have been so urgent in the matter, and offered to take 500 shares in Morfa Du beyond the number we were entitled to as shareholders in Parys, if a few others would do the same. This was the *project* we proposed. If the shares in Morfa Du are taken up the speculation will be in both mines second to none in the market; and we hope after this explanation that *every shareholder* in Parys will apply before the last day given (Sept. 3) for his proportion of shares. Our project was not responded to.

SATURDAY, AUG. 25.—The following prices are merely nominal:—Van, 31 to 33; West Tolgus, 72 to 74; Roman Gravels, 9¼ to 9¾; Glenroy Lead, 1 to 1½; Great Laxey, 20 to 21; Rookhope, 18s. to 20s.; Tankerville, 6½ to 7; Leadhills, 5¼ to 6; North Laxey, 15s. to 17s.; Parys Mountain, 8s. to 10s.; West Chiverton, 12 to 13; Devon Consols, 3¼ to 4

MONDAY, AUG. 27.—Market very inactive. Roman Gravels, 9¼ to 9¾; East Van, 4¾ to 5; West Tolgus, 72 to 74; Grenville, 30s. to 35s.; West Craven Moor, 11 to 12; East Craven Moor, 10 to 11; Carn Brea, 22 to 24; Dolcoath, 22 to 24; Parys Mountain, 8s. to 10s.; Glenroy Lead, 1 to 1½; South Condurrow, 7 to 7¼

TUESDAY, AUG. 28.—There has been a demand for tin shares to day at advanced prices. Carn Brea, 24 to 24; Dolcoath, 24 to 26; Tincroft, 10½ to 11½; Roman Gravels, 9¾ to 9¾; North Laxey, 14s. to 16s.; Leadhills, 5¼ to 5¾; Glenroy, 1 to 1¼; Van, 31 to 33; Great Laxey, 20 to 21; Tankerville, 6½ to 6¾; Rookhope Lead, 17s. 6d. to 20s.; Devon Consols, 3¼ to 4.

WEDNESDAY, AUG. 29.—Market quiet, and prices nominal. Carn Brea, 24 to 26; Devon Consols, 3¼ to 4; Dolcoath, 24 to 26; East Craven Moor, 10 to 11; East Van, 4¾ to 5; Glenroy Lead, 1 to 1¼; Great Laxey, 20 to 21; Leadhills, 5¼ to to 5¾; North Laxey, 14s. to 16s.; Parys Mountain, 8s. to 10s.; Roman Gravels, 9¾ to 9¾; Rookhope Lead, 17s. 6d. to 20s.; South Condurrow, 7 to 7½; Tankerville, 6¾ to 6¾; Tincroft, 11 to 12; West Chiverton, 12 to 13; West Craven Moor, 11 to 12; West Tolgus, 72 to 74; Grenville, 30s. to 35s.; Richmond, 4¾ to 4¾; Eberhardt, 5¾ to 6¼.

THURSDAY, AUG. 30.—Market very dull. Carn Brea, 23 to 25; Devon Consols, 3¼ to 4; Dolcoath, 24 to 5; East Van, 4½ to 5; Glenroy, 20s. to 22s. 6d.; Great Laxey, 20 to 21; Leadhills, 5¼ to 5¾; North Laxey, 14s. to 16s.; Parys Mountain, 8s to 10s.; Roman Gravels, 9¾ to 9½; Rookhope Lead, 17s. 6d. to 20s.; South Condurrow, 7 to 7½; Tankerville, 6¼ to 6¾; Tincroft, 10½ to 11½; Van, 31 to 32; West Chiverton, 12 to 13; West Craven Moor, 11 to 12; West Tolgus, 72 to 74; Grenville, 30s. to 35s.

FRIDAY, AUG. 31.—Market continues very inactive, and prices are almost the same as yesterday.

UNDERGROUND WATER.—The committee of the British Association for investigating the circulation of underground water in the New Red and Permian rocks has been reappointed, and the enquiry extended to the oolites. The hon. secretary, Mr. DE RANCE, F.G.S., read an elaborate report of the work done by the committee during the last year, and it is evident the Association considers the enquiry one of growing importance. Mr. T. Mellard Reade, C.E., F.G.S., followed with an individual report upon the wells of South-West Lancashire, in which he analysed the information he had collected during the last three years, and demonstrated by calculation of the water yielded by certain wells and bore holes that the yield of a well is dependent upon striking certain fissures or channels which ramify through the sandstone, forming ducts, conveying the underground water to the pumping stations. These ducts, which may be vertical fissures or may be channels along the planes of bedding, like arteries, conveyed the water from large areas of sandstone that have absorbed the rainfall from surface percolation. He also showed that the wells are nearly all affected by local percolation, and insisted on the necessity in most cases of excluding the water from the strata immediately surrounding the well, as it is liable to all sorts of organic contamination, by water-tight cylinders or tubbing. Mr. Reade's report was accompanied by sections showing the water lines of the various wells, which will be published with the report, and no doubt will prove of considerable practical utility.

MODERN MINERAL GROWTH.—Some few months since we published an interesting paper by Mr. T. A. Readwin, F.G.S., on "Mineral Growth at Ordinary Temperatures and under Ordinary Conditions," and as the subject is one of general interest many readers will be glad to learn that the paper has now been printed in pamphlet form Mr. Readwin has himself observed lead-vegetation in a Devonshire mine which had been closed not more than half a century previously. He has specimens of cuprite from Redruth showing copper growths whilst in his possession; he has a piece of Konigsberg argentite which has shown active and excellent silver growth since February, 1876; the grown off portions, so to speak, have themselves increased very much in bulk since January last, and now equal in bulk the aggregate from which they had their origin. The general alteration of the surface of the gold globules on Merionethshire auriferous quartz since 1856. A rock specimen in his possession has shown gold growth since July, 1875. Curiously jagged, spongoid, dirty chalcedonic quartz, coated nearly all over with yellowish gossan in 1865, shows 25 recent electrum growths. Mr. Readwin remarks that argentine growths are not at all scarce at the British Museum and elsewhere, and he adds that he brought home a few charming specimens of Konigsberg recent silver growth from argentite, in which he has detected some most interesting changes since they have come into his possession.

The CAROLINA GOLD MINES have been opened at San Luis, and machinery from England erected and working satisfactorily up to latest date before steamer's departure, the yield in 12 days being 100 ozs., brought home by the Guadiana, which arrived at Southampton on Thursday.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, August 29: The new shaft is now down 9 fms. 3 ft. below the deep adit level; the water is increasing as the shaft gets deeper, and the air has been so foul that we have been obliged to put a fan in the deep adit level, and put pipes from the fan to the bottom of the shaft, which is now finished; the men have good air to work in, and are making good progress in sinking. Crowlwm cross cut is still very wet, but there is no change to notice during the past week.

ASSHETON.—J. Craze, Joel Manley, August 30: No lode has been taken down in the 60, east of Boundary, since setting report. No change in the 50 and 20, east of Mawr, on north and south lode. In the 20, east of Mawr, on east and west lode, and east of the north and south lode towards Cambrian shaft, the lode shows a little more lead, and lets out more water than it has hitherto done: this we consider to be a very good indication, and an early improvement is expected. No particular change calling for remark in any other part of the mine. We shall sample 30 tons of lead ore to-morrow, for sale on Sept. 7.

BEDFORD UNITED.—R. Goldsworthy, William Phillips, Aug. 30: We set on Tuesday to case and divide the shaft from the 127 to the 138, to take out penthouse, and put in footway, for 10*l.* Most of the drivages being by the side of the lode, there is no change to notice. The stopes are producing the usual quantity of ore.

BLUE HILLS.—S. Bennetts, A. Gripe, Aug. 28: The 80 cross-cut north has just passed through another portion of the lode containing some good tinstuff, although no regular leader. The lode altogether at this point is from 13 to 15 ft wide, somewhat disordered, yet of a much more promising character than where seen in the rise, and will be opened out eastward forthwith, while the cross-cut is being pushed on towards the north part. The stope above this level in the rise is not so productive as it was. The north lode in the rise above the 30 east is worth 5*l.* to 6*l.* per fathom.

BODIDRIS.—H. Hotchkiss, Aug. 29: The 70 fm. level, driving west on middle lode, near we tern shaft, is going in a lode fully 3 ft. wide, of very beautiful character. Both sides of the lode is beautifully spotted with rich lead ore, but not in sufficient quantities to put on a valuation as yet. The 60, driving east on the same lode, is, I am pleased to say, undergoing a favourable change; the ground has become better for breaking and the lode highly promising, with a little lead ore on the footwall side of the lode. The men are making fair progress here now. The cross cut driving south for Maes-y-Pwll lode is also progressing very favourably in beautiful ground, made up of clay, sand, and beautiful limestone, in which we have a good quantity of spar; this shows as if we were very near the lode, and may cut it any day. The 45 yard level driving east is much the same in appearance as for some time past; the lode is rather small, but contains a very nice leader of blende ore and spar. The stope in bottom of this level is producing very good quality stuff for dressing floors. The 30 stope, in bottom of this level, is unproductive for ore. I have put the men again in the last end of the stope to follow on the ore we left here. In this end and in bottom of the stope there is a good feed of water coming out.

CAMBRIAN.—Thos. Glanville, Aug. 30: ESGAIR FRAITH: The eastern shaft is now sunk 8 fms. 2 ft. below the 10 fm. level, and at our present rate of sinking we hope to reach the required depth for the 20 fm. level within the next two weeks. The lode in the shaft is worth 45*l.* per fathom for copper and lead ores. The winze sunk below the 10, and west of shaft, is worth for lead and copper ores 50*l.* per fathom.—ESGAIR-HIR: The lode driving south of new shaft is worth 20*l.* per fm. for lead ore.

CLEMENTINA.—William Bennetts, August 29: There is nothing new calling for any remark in the mine since last week's report. Saturday next being our setting day, a full report shall be sent to you. I am glad to tell you that the late rains we have had have filled the new reservoir, and that it is very stanch.

COMBMARTIN.—J. Comer, Aug. 30: There is no change to notice in the mine since our last report. We are progressing with the dressing of the first parcel of ore.

COURT GRANGE.—G. Green, Aug. 29: Setting Report: The 16 east has been extended 3 fms.; lt. 6 in.; reset to four men, at 120s. per fathom. The lode continues to improve as we advance, and I am of opinion we shall be in good paying ground in a few fathoms more driving. The 16 west has been extended 1 fm 5 ft.; reset to four men, at 126s. per fathom. No change to notice. We have opened through old burrows for a shallow adit 6 fms. 4 ft.; reset to two men, at 30s. per fathom. A stope in the back of the 30, east of engine-shaft, to two men, at 7 s. 6d. per fathom; worth for lead 8*l.* per fathom. A side stope in the 16, east of shaft, to two men, at 70s. per fathom; worth 5*l.* per fathom, with signs of improvement. A stope in the back of the deep adit east of shaft, to two men, at 60s. per fathom; worth 15*l.* per fathom. A side stope in the same level west of footway, to two men, at 70s. per fathom; worth 6*l.* per fathom. Elgar cross-cut has been extended 1 fm. 4 ft. 2 in.; total distance, 37 fms. 5 ft. 6 in., without any lode being met with. Suspended for the present.—Broginon: The 12 east of new shaft has been extended 5 ft. 8 in.; reset to two men, at 168s. per fathom. No change. The men at present are clearing their stuff. The ventilation in this end is very bad, but will be remedied when the winze sinking below the shallow level is communicated; it is now down 5 fms. 5 ft., and reset to four men, at 205s. per fathom. The lode in the bottom has improved, and now worth for lead and blende 6*l.* per fathom. I hope to commence sinking the engine shaft in the course of a fortnight. The weather lately has been most inclement, and has hindered progress in our surface operations very much, still every effort is being made to push the works forward.

CWM DWYFOR.—J. Jewell, August 30: The lode in the 20, driving west of Stewart's shaft, is now 18 in. wide, yielding saving work for lead. In the winze sinking below the 20, west of Stewart's shaft, on the caunter branch, the men are desuing the lode. In the eastern end of this winze No. 4 lode has just come in, and formed a junction with the caunter branch, but in the western end of the winze there is a horse of ground between the two lodes. I am hoping to find when we next blast down the lode in the winze that these two lodes unite again, and that it will be more productive for lead. We have discovered another branch about 3 in. wide, well charged with lead; it has come into the winze from the south side, with a northerly underlie, and I should think from its present dip it will unite with the main lode in about 3 ft more sinking: this branch has never been seen in any part of the mine before. I shall send out samples of a small parcel of lead next week. I believe it to be the best parcel we have had here.

CWM ELAN (NEW).—W. Goldsworthy, Aug. 25: There is no change to notice in any of the underground bargains since last report. The surface work is going on regularly, and I am glad to say that our water reserves at the lakes is running over at the overflow; the recent rains have kept the lakes well filled. We have 4 tons of lead and 12 tons of blende ores in the bin.

CWMYSTWITH.—Aug. 28: Michell's level east on Michell's lode: The lode is small and poor, but in favourable looking ground for producing ore. The stope in the back west of cross cut, on Michell's lode, is still worth 10 cwt. of lead ore per fathom, but the pipe is getting short as we go up, and at present only 2 fms. length.—Michell's level west on the new lode: The lode is 2 ft. wide, with small spots of lead ore: a nice promising lode.—Michell's cross cut north: The ground still continues stiff for driving.—The 12 over Michell's level on the new lode: The part of the lode as being taken down for 1 ft. wide is producing saving work.—Gill's upper level east on the new lode: We have not taken down any part of the lode since our setting-day; thus for speed we are driving on the north side.—Gill's upper level west on south lode: The lode is 2 ft. wide, strong and masterly, composed of spar with occasional spots of lead ore, but not to value; at the same time a promising end.—The stope in the back of Michell's level west of rise on the new lode: The lode is 3 ft. wide, worth 15 cwt. of lead ore per fathom.—The stope in the west end of the winze, under Rosa level, on the new lode: The lode is 2 ft. wide, worth 12 cwt. of lead ore per fathom.—Stripping down the south side of the winze under Michell's level west, on the new lode: The lode is 3 ft. wide, worth 10 cwt. of lead ore and 1 ton of blende per fathom.—We have not done anything in the 12, over Level Fawr, since last reported on, as we have the men engaged at the surface assisting in erecting the new and repairing the old machinery on the dressing-floors. The wide stope at Level Fawr, on the copper lode, is still 2½ fms. wide, worth 12 cwt. of lead ore per cubic fathom. A stope in the back of the 24 fm. level, over Level Fawr, on Kingside lode and branches, is 9 ft. wide, worth 15 cwt. of lead ore per cubic fathom. The stope in the back of Kingside adit level, on Kingside lode, the lode is 3 fms. wide, worth 8 cwt of lead ore per cubic fathom. The stope in the back of the 30 (Pugh's shaft), on the Comet lode, the lode is 3 ft. wide, worth 13 cwt. of lead ore per fathom. We have not met anything of importance in clearing the old workings at Pugh's shaft since opening the stope in the Comet lode. Our tributors are working well, and getting fair wages. The weather is still very unfavourable for surface work, but we have the elevator and separator, with Collom's jigs working, but have not been sufficient as yet to say what will be the result; however, we have every reason to think that it will be a great saving in dressing. We sampled 25 tons of lead ore to day, and have 40 tons of blende ready for sale.

DERESBY MOUNTAIN.—William Bennetts, August 29: There is nothing new to report in the mine since last report. The lode in No. 4 level still looks well.

DERWENT.—John Morpeth, Aug. 27: Settings for September: Jeffries' Shaft.—Middle Vein: The 95 east, 9 fms. from shaft, is driving by the side of the vein. The sides in this level, some 8 fms. back from the end, are yielding 2½ tons of ore per cubic fathom, or (say) 3 tons for the full width. No. 1 stope, in the back, is 10 ft. wide, for which width the lode produces 4 tons of ore per fathom, or 2½ tons per cubic fathom. No. 2 stope is also 10 ft. wide, yielding for that width 2½ tons of ore per fathom, or 1½ ton per cubic fathom. No. 3 stope is inproving, at present 7 ft. wide, worth 18 cwts. of ore per cubic fathom. No. 4 stope is 4 ft. wide, worth 12 cwts. of ore per fathom. The flats over this level, the 95, are coarse, producing 14 cwts. of ore per cubic fathom. The rise out of the workings some 18 fms. east of shaft has reached the shale overlying the great limestone, and we hope in a few more weeks to hole to the 80. The vein in the 93 west, 118 fathoms from shaft, is 1 ft. wide, containing a few spots of ore, but nothing to save. No. 1 stope, in back of this level, is 7 ft. wide, worth 14 cwts. of ore per cubic fathom. No. 2 is 6 ft. wide, worth 14 cwts. of ore per fathom; and No. 3 is 10 ft. wide, worth 14 cwts. of ore per cubic fathom, or 23 cwts for the full width.—New Vein: The rise upon this lode, in back of the 95 cross-cut, has been risen 1 ft. 5 in., and is reset at 14*l.* per fathom. The vein is 2 ft. wide, contains fluor spar, some limestone, and a little lead ore; is letting out water, and is not without promise.—Sun Vein: The level west from sump, under the cross-cut in the 70, opposite the shaft, at the top of Coal Hill, is laying open good backs to the little limestone, to be stoped down after awhile. The vein in the level is 2½ ft. wide, and yields some 4 cwts. of ore per fathom. In the course of a month or six weeks I hope we shall be able to attack the vein east from sump, where there is excellent ore.—Reed's Shaft: North Vein: This vein in the 50, 208 fms. east of shaft, is 2 ft. wide, but continues poor.—Taylor's Shaft—Middle Vein: The cross-cut north in the 40, 126 fms. east of shaft, was driven last month 2 fms. 6 in.; the only change is dampness in the roof.—Westgarth's Shaft: Middle Vein: The 93, 48 fms. west of shaft, is driving by the side of the vein. The stope over the 74, 178 fms. west of is 2 ft. wide, worth 10 cwts. of ore per fathom. The machinery is all well, and the reservoirs full.

DEVON GREAT CONSOLS.—James Richards, Aug. 30: Wheal Josiah lode having taken a more perpendicular dip, the sinking of Richards's shaft to the south thereof in ground favourable for progress, and at the present sinking the required depth of 300 fms. will be reached in about three from the present date.—Wheal Emma: New Shaft, New South Lode: new shaft sinking below the 175, 5 ft. of the lode is being carried, which posed of capel, quartz, mundic, and ore worth 5 tons, or 15*l.* per fathom more lode standing on each side of the shaft. In the 175 fathom 5 ft. of the lode carried is worth 2 tons, or 6*l.* per fathom. In the 15 level east 4 ft. of the lode carried is worth 3 tons of ore, or 10*l.* per Gorrell's winze, below the 160 east, is down to within 2 ft. of the required for the 175, the lode at this point showing a little improvement. In the the lode is presenting a more kindly appearance, and an improvement is ex In the 100 east the ground continues favourable for progress, and the lode 3 to 4 ft. wide, producing a little ore of good quality. Webber's cross-cut at the 100 east, is driven into the south part of the lode about 3 ft., which posed of a strong capel, quartz, a quantity of arsenical mundic, and good of ore.

DUBBY SYKE.—W. Tallentire, Aug. 24: East Drift: We have driven vein 3 fms. 1 ft. this month, by four men, at a cost of 3*l.* 16s. per fathom place is set to the same men at the above price per fathom, making now the distance driven east from rise in the vein 17 fms., the whole length of which produced nice samples of lead ore; the vein is at present looking more favo composed of very nice red mineral, carbonate of barytes, and spots of le The south cross-cut has been driven 2 fms. at a cost of 3*l.* 6s. per fathom; the is now set to two men at 3*l.* per fathom; this is without alteration.

EAST DARREN.—Aug. 29: In the cross-cut south at the 80 branches of stuff are continually being met with, containing mundic, spots of copper lead ore; the ground in the present forebreast looks more favourable for the duction of mineral than it has hitherto. In the 80 west of western cross-cut south lode, the lode is 8 ft. wide, containing branches of lead ore, worth 18 per fathom; a hard, strong, and promising lode. In the same level east of cut the lode is 5 ft. wide, still in broken up ground, composed of light clay spar, spots of copper, and stones of lead ore, but not sufficient to value. cross-cut south at the 68 the ground is getting a little stronger, being compo light clay slate, with occasional branches of carbonate of lime being met with ing spots of mundic and lead, and hope to intersect the south lode in a few The stopes and pitches throughout the mine are yielding fair quantities ore. Our machinery is in good order, drawing and dressing progressing reg and sampled yesterday 50 tons of silver-lead ore, for sale on Monday, Sept

EAST VAN.—W. Williams, Aug. 28: At the 40 cross-cut we have crossed from Tempest shaft 6 fms. We have crossed through the Sookan and inte the bastard, which, being so varied in width, we may cut the main lode few feet more crossing. The 25 is now 40 fms. west of Tempest shaft, havi driven 4 fms. since my report on the 7th inst. I am glad to say that the ance and character of the lode continues to improve with our progress we and now and then good spots of lead ore are met with, so that we are lookin war! to make a discovery at this point.

FRANK MILLS.—J. Rowe, N. Addems, Aug. 28: Setting Report: Mid drive south of winze between the 100 and 115, north of engine-shaft, on east six men, at 5*l.* per fathom; lode producing 10 cwts. of lead ore per fathom have about 6 fathoms to drive to communicate with a rise in back of the 11 for ventilation; when completed a large section of ground will be ope stoping. At the 84, north of engine-shaft, on east lode, a cross-cut is being by two men, at 2*l.* 15s. per fathom, to meet with the east part of the lo have just intersected the hanging wall of it, and as far as seen is producin stones of lead; when cut through we shall immediately commence to drive and south on this point. The 72 to drive north of boundary air rise, on we by two men, at 3*l.* per fathom; lode here is still disordered by the flookan 45 to drive north of boundary air rise, on west lode, by four men, at 3*l.* 1 fathom; lode of a very kindly appearance, producing a little lead and We have about 20 fms. more to drive before getting under the run of ore opened up in the drivage of the Old Wheal Exmouth adit (about 23 fathoms us), from which large returns have been made in the back of the adit level. tribute pitches are being worked by 17 men, for lead ore; five pitches, by 1 at 5*l.* per ton; and two pitches, by six men, at 4*l.* per ton. We are pl be enabled to state that good progress is being made towards the comple the Teign Valley Railway, which passes close by this mine. When comp will effect a great saving in the working expenses of the mine, and also en to send away large quantities of spathose iron ore of good quality that we opened up in this property.

GAWTON COPPER.—George Rowe, George Rowe, jun., Aug. 28: The the rise in the back of the 132 is without change, worth 12*l.* per fathom. winze sunk below the stopes, in the 117, is communicated with the rise, re good ventilation, where the lode is worth 12*l.* per fathom. The lode in t east is carried 5 ft. wide, producing 6 tons of ore per fathom, and showing kindly appearance for further improvement. The lode in the 105, west of cut, is 7 ft. wide, producing 12 tons of ore per fathom. We have intersec small branches on the north side of the lode, in the 95 cross-cut, indicati main lode to be very near. There is no change in the appearance of the gro the 82 cross cut south during the past week. The tribute departments als out change.

GLENROY.—R. Rowe, Aug. 29: I have just come from underground. 25 end south the lode is 4 ft. wide, with a good mixture of blende. The is not so good as last reported. I see no change in the shaft to report; the at 11 large, and ground favourable for sinking.

GOGINAN AND LEVEL NEWYDD.—Aug. 29: The lode in the 120, east of western shaft, continues large, and the portion carried is producing saving work for the dressing floors. Here we now intend to cut through to ascertain its value. In the rise over this, west of western shaft, the lode also large, and worth at present 14 cwts. of ore per fathom. In the winze sinking below the 120, 70 fms. west of Bryn Pica shaft, the lode is being cut gradually, and so far as proved contains a mixture of ore, but not rich; the part we consider being still to the north. In the stope over the 100, 25 fms of Bryn Pica shaft, the lode is worth 12 to 14 cwts. of ore per fathom. stopes over the same level, 45 fms. and 65 fms. west of Bryn Pica shaft, the will produce from 10 to 12 cwts. of ore per fathom. The lode in the sto the 120, west of western shaft, is large, and producing 18 cwts. of ore per fa The lode in the 100, east of Bryn Pica shaft, is without any change, exc spots of lead and copper at times. The tribute pitches are producing average 11 cwts. of ore per fathom. Surface operations are being carried fast as possible, but the continual wet weather is very much against such however, we are doing our utmost to get about as much ore as we can b ensuing day, which is on Sept. 11.

GREAT DYLIFFE.—Evan Evans, Aug. 27: Dyliffe Lode: At the 12 on Dyliffe ode, we have now very good ore, and is worth about 16*l.* per fa The winze in the bottom of the 25, west of the old Dyliffe engine-shaft, enough to meet the 45 east, and is suspended to-day. In another week to be far enough to effect a communication with the above winze, when this we shall commence stoping good ore ground in this place. The new lode driving in the bottom of the winze is at present looking very good—better anything we have seen before. In my opinion it is very encouraging. Every besides is looking much the same as last week.

GREAT LAXEY.—F. Reddicliffe, Aug. 29: We have previously spoken of him trance to the sinking of Welsh shaft, owing to the work doing to wheel. We have had three stops of about a week each time, and used intervals for pumping the water out again; one more such stop of about will enable the job to be completed, after which we hope to continue the with but little interruption. The 235, end north of Welsh shaft, is a little f improved, now worth 45*l.* per fathom. The end driving south of winze, to this level, is also worth 45*l.* per fathom, and there only remains some 4 f 5 fms. to hole the two places. The lode is very wide at this point (15 ft.) a piece of rock in the middle; the whole will be taken down when the has been effected, and we expect to find it goes nearly to the winze. north at the same level a part of (4½ ft.) of the lode only is being carried driving; present end worth 20*l.* per fathom. The lode in the 220 end 7 ft. wide, but worth only about 6*l.* per fathom. In driving the 210 cross-cut we are now beyond the influence of the small barren slide, and again improving; present value 20*l.* per fathom. The stopes in this part mine are of their late average value, some of the stopes in the 200 not out so well as indicated by the level when driving.—Dumbell's: The work, such as widening shaft at the level, cutting ground for turning, for resuming the sinking the shaft is completed, and sinking just below There is a little improvement in the 140 north, the lode having shown stones of lead during the last day or two, but beyond this there is no the ends or stopes of this part of the mine. All machinery, &c., at surface on all right.

GREAT RETALLACK.—J. Harris, Aug. 25: We have not been able much at the bottom of the shaft at the 30 this week on account of the foul the air at that level. I have put two men more with the shaftmen to force on the work we have to do, as it appears the machine must be kept stantly at work. The leader part of the lode at the bottom of the shaft is 18 in. to 2 ft. wide, and is worth fully 2 tons of good blende per fathom. stops below the 45 are much as last reported.

GREEN HURTH.—W. Vipond, Aug 24: There is so little change in the since I wrote the monthly bargains' report on Aug. 22 that I need only repe yield of the workings that are producing ore at present. The end of the going south, on the west side of No. 1, is worth 6 cwts. of ore per fathom, showing signs of improvement in the top part of the working. The end north, on the same branch, is worth 16 cwts. of ore per fathom. The me were working on the west side of the level, in No. 1 cross-vein, are now wo this end. The branch going south, on the east side of No. 1 cross-vein, is 1 ton of ore per fathom. The stope in No. 2 cross vein is yielding 1 to per fathom, and the stope below the level in the north end is yielding 1 fathom. We have got some small samples of ore this week from the end north on No. 3 cross vein. No change in the cross-cut south from adit level s shall begin next week with two men to drive east from where No. 1 cross-v first cut, to prove if there is anything more laying in that direction. We the delivery of a truck of ore yesterday 7 tons 4 cwts.

HARWOOD.—W. Tallentire, Aug. 24: Herdship, North Stope: 2 fms. been stoped here, by two men, at a cost of 2*l.* 7s. per fathom; set to the men, at 2*l.* 5s. per fathom. The vein has improved this week, composed of red mineral and clay; worth for lead ore ⅛ ton per fathom.—South End: 1 fa have been driven, by two men, at a cost of 3*l.* 17s. per fathom; set to c has been stoped, by the same two men, at 2*l.* 7s. per fathom; end 4 stoping, by two men, at 2*l.* 5s. per fathom. This end keeps its value, from to 6 cwts. per fathom. Dressing ore is being proceeded with as fast as pos

HINGSTON DOWN CONSOLS.—Thomas Richards, August 23: Bailey's will be down the required depth for the next level by the end of this week, diately after that is made driving will be commenced.—Bailey's Shaft: In west of Nicholls's winze, the lode is worth 4 tons of ore, or 12*l.* per fathom. winze in the bottom of the 160 is worth 5 tons, or 15*l.* per fathom. In in the back of the 160, east of Nicholls's winze, the lode is worth 6 tons, per fathom. In the stope in back of the 160, west of Nicholls's winze, the worth 3 tons, or 12*l.* per fathom. In the 150 west, on the 140 west the lode is for the present disordered by cross courses. In the 140 west produces stones of ore. The stope in back of the 140, west of Chynoweth's worth 5 tons, or 18*l.* per fathom. In the winze sinking below the 120 there

...In the 110 west the south part of the lode is producing rich stones of ore, ...very promising.
...MAIDEN.—H. Bennett, Aug. 30: The shaftmen are pushing on as fast as ...ible to reach the 90. I am pleased to say that the 60 end, west of engine-..., has very much improved; the lode is 20 in. wide, yielding some rich ar-...gundie, and good spots of copper ore, and have every appearance of a ...improvement. Taking into consideration that this end is going west in ...ground standing 90 fms. high, it is one of the most important discoveries ...made. All our other underground operations are without any change to ...The last new lode discovered in the lobby is about 1 ft. wide, composed ...gossan, sulphur, mundic, and capel, with good stones of copper ore; it is a ...kindly lode. I hope in another week to see more of it, as we shall bring up ...deeper slope. We shall begin to open on the new north lode to-morrow, as we ...have brought up a deeper stope, and shall be able to say more about it in the ...next report.
...LLESTON CONSOLS.—W. Hancock, J. Chynoweth, Aug. 27: The lode in the ...west of shaft, is of a very promising appearance, producing at times excellent ...stones of blende and lead, and good progress is being made in driving it; we have ...cut 11 fms. driven this last month; in about four weeks we hope to communi-...cate with No. 3 winze sinking under the 18. In the 18, east of shaft, the lode will ...yield on No. 3 winze sinking and 2 cwts. of lead per fathom. In the same level ...there is about ¼ ton of blende and 2 cwts. of lead per fathom. In the same level ...to the west the lode is composed of gossan, spar, capel and mundic, with occasional ...bunches of blende and lead—a very kindly end. The stopes in back of this level, five ...in number, are producing about 1 ton of blende and ¼ ton of lead per fathom. ...Further, are producing about 1 ton of blende and ¼ ton of lead per fathom. ...The winze is down 7 fms. below the level, and producing at times fine clinkers ...of lead. No. 4 winze is down over 12 fms., or the required depth for the 30, and ...will be soon sunk nearly all the distance in a capital lode of blende and lead. We ...have now commenced driving east from the bottom of it towards the level in a ...direction worth about 20l. per fathom. In the bottom of the winze there is some good ...bunches of fahlerz, which we have sent to have assayed, and will no doubt make a ...good guinea for silver. Our last sale of ores weighed off in money value ...£8 6s. The machinery is all in fair working order.
...ST CADWELL.—A. Waters, Aug. 29: The men in the 32, south of engine shaft, ...are very much bored into the winze from the 16, and we hope to make better pro-...gress by the end than hitherto; we have now better ventilation, and shall soon ...be in this end than hitherto; we have now better ventilation, and shall soon ...be in the other ground. The 16 south is still passing through a sparry, vughy lode, ...but rather ground. The 16 south is still passing through a sparry, vughy lode, ...somewhat slightly charged with lead ore. A considerable improvement may be ...expected in the next 5 to 6 fathoms driving, for we shall then be under the ore ...which is seen in the adit level. We could not work in the back of the adit south ...end for want of air. The weather has now changed for the ...nearly a week past for want of air. The weather has now changed for the ...better, and the men have sufficient air to go on with their work again. The new ...rise, and the men have sufficient air to go on with their work again. The new ...engine-shaft surface coming down upon this ground is being deepened with fair ...progress. The engine is now in place, and we are preparing loading for winding ...to surface. The engine is now in place, and we are preparing loading for winding ...to surface, which we hope to have fixed next week. Our sampling to-morrow will be ...for the month.
...Stones of lead ore for the month.
...ST DOWELL (THE).—J. Prisk, E. Kempthorne, August 30: In sinking the shaft ...in the 32 the lode continues to improve; it is now 10 ft. wide, worth 35l. per ...fathom for length of shaft. This point is being pushed on as fast as possible, by ...two men, at 18. per fathom. The lode in the 36 end, east of the shaft, is 4 ft. wide, ...worth 15l. per fathom. The lode in the 25, west of the said shaft, is 9 ft. wide, and ...worth 15l. per fathom. The late heavy rains having retarded our progress in the ...winze we set the men have been employed in the old mine raising tinstone for the ...stamps, which now have a fine supply of water. Everything in the mine is now ...working well.
...WILLIANEAR.—John Gilbert, Aug. 29: We have not taken down any lode for ...the past few days in the 80, west of the skip-shaft, but from its appearance I should ...think it continues to be worth fully 1½ ton of copper ore per fathom. The ...winze in No. 2 rise, in the back of the 67, west of the skip-shaft, is also worth ...one ton of ore per fathom. This rise is now up 13 fms., and we shall commence ...to break to sink a winze in the bottom of the 50 to communicate with this rise. ...The lode in No. 3 rise, in the back of this level, is 2½ ft. wide, and worth 3½ tons ...of ore per fathom, and is also producing an increased quantity of blende. The ...lode in the bottom of this level is worth 6 tons per fathom. We have again re-...sumed the sinking of the winze in the bottom of the 80, west of the skip-shaft, by ...10 fms. The lode is 4 ft. wide, and worth 3 tons of ore per fathom. The lode ...has improved in the 90, west of the skip shaft; it is now 4 ft. wide, and worth fully ...one ton of ore per fathom. By the end of this week Gundry's shaft will be down ...to the 90 fms. under the 80. We shall then commence to cut plat, and to drive a cross-...cut south to intersect the lode at the 90. We calculate that we shall have about ...10 fms. to drive, but that will depend in some measure on the underlie of the ...lode. The lode in the 80, west of Gundry's shaft, is 4 ft. wide, and worth 1 ton of ...copper per fathom. The lode in the stope in the back of this level, east of shaft, is ...3 ft. wide, and worth 3 tons of ore per fathom. The lode in the 70, west of shaft, ...is 3 ft. wide, and worth 3 tons of ore per fathom. The lode in the rise in the back of this level, ...worth 3 tons of ore per fathom, and is also producing a large quan-...tity of blende. The lode in the rise in the back of this level, west of the shaft, is ...3 ft. wide, and worth 3 tons of ore per fathom. This rise is up about 5½ fms. ...The lode in the 60, east of shaft, is 4½ ft. wide, and worth 4 tons of ore per fm. ...Stoping is done 3 fms. further to drive this end to communicate with the rise in the back ...of the 50. The lode in the 60, west of shaft, is worth 2½ tons per fathom. Our ...sinking and pitwork are working well, and we are making satisfactory progress ...with all our other underground and surface operations.
...NEW YELLOWD.—J. Harris, Aug. 30: The lode being stoped in back of the ...engine, level, west of cross-cut, south of engine shaft in south lode, is about 1½ ft. ...wide, composed of clay slate and spar, with a small rib of lead throughout; ...worth about 10l. per fathom. In the same level ...is worth about 10l. per fathom. In the same level ...to four men, at 3l. 6s. per fathom, and clear their stuff. The lode being stoped ...on the end of winze in bottom of adit level, on south-west branch, is about 1 ft. ...wide, composed of clay-slate and spar, with a small rib of lead, and ...looks improving; set to six men, at 5l. per fathom, and to clear their stuff. ...The cross-cut in the 20 fm. level, driving to cut the lode coming down in the ...winze, is being pushed forward; the ground is not so hard as it has been, and ...small veins of spar in the forebreast; set to four men, at 7l. per fathom, and ...to cut.
...SOUTH LAXEY.—J. Sowden, Aug. 29: The lode in the 146 end is very strong ...and 3 ft. wide, and producing a little lead. I shall be much disappointed if we have ...not a rich lode in the south end shortly, judging from the character of the lode, ...which is a very congenial spar, baryta, and lead intermixed. The 121 stope is not so ...rich eastward; now worth 15 cwts. of lead ore per fathom. The 60 sole stope ...is worth 15 cwts. per fathom. The stope in the roof of the 60 is worth 1½ ton per ...fathom. The 50 roof stope is worth 10 cwts. per fm. We are following the lead ...in the 50 cross-cut, and to-day when taking down the branch we broke good stuff ...on the washing floors.
...BALLA.—J. Phillips, Aug. 29: We have forked the water to the 30, and find the ...end driven 11 fms. 3 ft. east and 9 fms. west, and most of the backs are stoped ...out. They have left good lead standing in the eastern end and in the end of the ...level. The western end is poor, but is a very kindly lode. There is a good lode ...coming down in the bottom of this level; this tells well for the 40, which we hope ...shortly to reach. The western end, in the 23, is still poor for lead, but we are ex-...pecting a change for the better here. We have done nothing in the eastern end, ...but the north lode, driving east, this week for want of miners. There is a fine ...lode in this end, it will produce fully 1½ ton of lead per fathom, and likely ...more. In the end driving east from No. 2 cross cut, in the 23, on No. 1 north ...lode is a beautiful lode from 3 to 4 ft. wide, letting out water, and will produce ...20 cwts. of lead per fathom; this is in whole ground for a mile in length, and is ...getting in whole ground to surface. All to the north of the old men's workings ...should drive short cross-cuts to this lode from the levels above the 23. There is ...a change in the rise in back of the 14—still a good lode. This mine, in opening ...the ground, far exceeds our expectations.
...TREDDROSA.—H. Nottingham, Aug. 30: New Lode: The 33, driving south of ...Wheal's, is making satisfactory progress; the character of the lode is without ...change. The 33 cross cut, driving east of shaft, is progressing as usual. No. 1 stope ...in the 33 is worth 12 cwts. of lead and 15 cwts. of blende per fathom. No. 2 side ...sinking; this work is finished. We think now to lengthen the stope a little ...towards before cutting more of the roof; worth 8 cwts. of lead and 15 cwts. of ...blende per fathom. The ground in the 13 is a little easier for driving, and worth ...one ton of lead and the same of blende per fathom.—Goddard's Lode: No change ...to report. Stope over the 23 south. No. 3 stope, south of ditto, is worth 15 cwts. of ...lead and the same of blende per fathom. The 13 end is still hard and unproduc-...tive. In No. 5 shaft we are sinking to meet this end; the ground is more loose, ...but likely for ore; the lode is yielding a little lead and blende, but not enough to ...pay. The stope under the 6, south of No. 4 shaft, is worth 8 cwts. of lead and ...3 cwts. of blende per fathom. The 33 tons of blende just sold will be weighed off ...next week. We shall now direct our attention more to leadstuff again; we are ...getting supplied with stuff. We should have been putting in the new jiggers by this, ...but have put the carpenters to make a hay-shed and carpenters' shop at the end of ...the present building. We have much felt the need of these since the stable ...was removed.
...PARK MOUNTAIN.—T. Mitchell, Aug. 27: The 90 cross-cut south by six ...fms. for the month, at 12l. 10s. per fathom; this end is at present looking more ...promising than we have ever seen it. We have to day cut another small branch ...about 2 to 3 in. wide, containing rich copper ore. The stopes in the interme-...diate level by eight men, at 6l. per fathom; the lode is worth 4 tons of copper ore ...and 1 ton of sulphur per fathom. The stopes in the 80, west of cross-course, by ...four men, at 6. per fathom, yielding 4 tons of copper ore per fathom. These ...stopes are not looking so well at present, and we have put two of the men to join ...the pares at the intermediate stopes, which makes eight men now. The stopes in ...the 80, east of rise, by six men, at 6l. per fathom, yielding 4 tons of copper ore ...and 1 ton of sulphur per fathom. The stopes in back of the 45, east of rise, by ...four men, at 6l. 10s. per fathom, worth 4 tons of copper ore and 2 tons of sulphur ...per fathom. The stopes in the 45, west of rise, by six men, at 6l. 10s., yielding ...4 tons of copper ore and 1 ton of sulphur per fathom. The stopes in bottom of ...the 45, by eight men, at 6l. per fathom; the lode continues wide, yielding 6 tons of ...copper ore and 1 ton of sulphur per fathom. The stopes in the 45, east of cross-...cut, by six men, at 6l. 10s., yielding 4 tons of copper ore and 1 ton of sulphur. ...We have to drive east of cross course by two men, at 3l. per fathom; the forebreast ...shows quartz intermixed with yellow copper ore. The 30 to drive west of trial ...cross-cut on the lode by two men, at 3l. per fathom. We have just intersected the ...lode here, and have commenced to open west on its course; the place is beginning ...to look a little ore of good quality, and we expect soon to open up good tribute ...ground. One of the stopes at the 65 being rather poor we have removed the men ...from it, and the lode at the 30, which is worth at present about 2 tons of ore per ...fathom, and is likely to improve. We have let seven tribute pitches to 14 men at ...their usual prices.
...PARK MOUNTAIN.—T. Mitchell, Aug. 30: We have been getting some good ...stones of copper ore from the 90 south this week from a branch crossing the fore-...end; the ground is getting more mineralised as we go forward, and is at pre-...sent looking very kindly. The 30 west continues to improve, and yielding some ...good tributing work. All other points are without change.
...TREMELLY BRIDGE.—C. Williams, Aug. 30: The Rake vein in the 30, east of ...Gundry shaft, is 6 ft. wide, of highly promising character; worth 1½ ton of lead ...per fathom, and improving. The same vein, in 30 west, is without change; ...worth 1 ton of lead per fathom, ground favourable. The vein in stope in the back ...of the level is 6 ft. wide; worth 1½ ton per fathom, ground easy. The Lumb ...lode, going east from the south cross-cut, in 20 east, is worth 25 cwts. of lead ore ...per fathom; the vein is wide, and highly promising for a large deposit of lead ore. ...In Gundry's vein, in the 20 north west, is 5 ft. wide, and worth 1½ ton of lead ore ...per fathom. The Sun vein, going east under Gillfield level, is not looking quite ...so well to-day; worth at present 15 cwts. of lead ore per fathom. We have 20 tons ...of lead ore smelted in the works. Dressing and smelting are being carried on ...with regularity.
...TREGAJLLS.—S. Bennetts, P. Vian, Aug. 25: The 70 east end is producing ...some regularity tinstuff, but not of much value. In the 60 east the north part of the ...lode is again diverging from the south part, and is not so productive as it has been ...the south part is worth 7l. per fathom. The 48 west is worth 8l. per fathom. The lode where being out above this level, on the north side of the heave, is not so valuable as on the south section. The other points of operation are much the same as best noticed.
PLYNLIMMON.—J. Garland, Aug. 29: New Shaft: Casing, dividing, and fixing footway in this shaft will be completed this week, and the driving of the 36 east and west resumed on Monday next. We shall then commence putting in spreaders in the roof of the 24 to carry pulleys and wire-rope for draining Jones' and Herberts' winzes with the pumps instead of manual labour, as at present, so as to bring up the 36 east as fast as possible under the courses of ore gone down in the bottom of the 24. All bargains throughout the mine maintain their respective value as given last week. Drawing and dressing, which have been hindered pending the completion of work in shaft, will now be pushed on as fast as possible towards another sale of lead ore. The machinery throughout is in fair working order, with an abundant supply of surface water.
ROMAN GRAVELS.—A. Waters, August 29: The 106, north of flat-rod shaft, is worth 2 tons per fathom. The 106, south of winze, south of shaft, is worth 1 ton per fathom. The 95, south of new engine-shaft, is worth 1 ton per fathom; the lode is making a bend to the west of south, and we may, therefore, expect an improvement shortly. The 80 south is worth 2½ tons per fathom. The winze below the 80, north of shaft, is worth 3 tons per fathom. The 70, north of Powell's winze, is worth 5 tons per fathom. The 65, south of Stokes', south of new shaft, is worth 2 tons per fathom. The 50, south of ditto, is worth 3 tons per fathom. No other change to notice. We are still delayed with the pitwork at the new engine-shaft, waiting for the plates, pumps, &c., from Cornwall.
SOUTH CONDURROW.—There is no change to report since last week.
SOUTH ROMAN GRAVELS.—John W. Powning, Aug. 24: The 45 fm. level east is being pushed forward rapidly; the cavity in the fore end is filled with protoxide of iron and blue clay. I have not yet met with any loose lumps of ore, but I expect to meet with such daily. This cavity is very similar to those met with in the Ladywell, Gritt, and other mines in this neighbourhood, most of which produced ore in large quantities. There is an open in the 45 fm. level west about 6 in. wide, and there is now a very promising lode on the footwall. A branch of ore in this direction would be a very important feature in this mine.
— John W. Powning, Aug. 30: Sheifield: The 45 east is being pushed forward with good speed; we have driven since last report 3 fms. 1 ft., making distance from shaft 16 fms. The great spar course referred to in last report has given out, and the forebreast is now made up of protoxide of iron and lumps of limespar mixed with ore, a very promising looking end, and we are expecting a great improvement here daily. Good progress is being made in the 45 west; we have got into a very wide loose lode, but poor for lead. The ground on both sides of lode is very much broken, and requires to be timbered. This end is now forth 12 fms. 5 ft. from shaft, and is very wet.
SOUTH TOLCARNE.—There is no change to report on in this mine.
SOUTH WHEAL FRANCES.—A. T. James, Aug. 30: Pascoe's shaftmen are employed in cutting ground preparatory to sinking this shaft below the 205. The 205 west is worth 10l. per fathom; the same level east is worth 8l. per fm. The stopes in the back of the 205 are worth on an average 15l. per fathom; here 33 men are employed in stoping at 8l. per cubic fathom. The 185 west is worth 8l. per fathom; the lode is large and promising. The 185 winze is down about 17 fathoms; at present suspended in consequence of the water. The stopes at the 185 are worth on an average 12l. per fathom; stoping by 30 men, at about 5l. 10s. per fathom. We are selling about 5 tons of tin per week; this at the present low price will about meet the current cost of the mine.
SAINT PATRICK.—William Francis, Aug. 29: In sinking under the 120 yards cross-cut we are getting nice prills of lead ore in a fine bearing matrix. The cross-course is so wide that we can only take the heading side. The 60 yards cross-cut north is progressing rapidly in the same fine bearing chert measures.
TANKERVILLE.—Arthur Waters, August 30: The 192, east of Watson's shaft, is in a large lode, worth 2 tons per fathom; this end is just entering the ore ground. The 192 west is now up to the commencement of a cavity, into which we can see about 10 ft.; we shall see more of the lode on either side of this great vugh by next week, in time for the usual report. We hope to have something good to report on. The stope in back of this level, west of winze, is worth 3 tons per fm. The stope east of winze is worth 1 ton per fathom. The 180 east is worth 1 ton per fathom; this end is now 18 fms. from shaft. The 180 west, now 22 fathoms from shaft, is into a lode worth 3 tons per fathom, and the end looks like entering our great west bunch of ore, as seen in the upper levels. The 167 west is improved, and looks well for making way into richer ground than we have seen in this level for some time past. Other points as reported last week. The 100 tons of lead ore sold to-day realised 1230l.
TEESDALE.—Thomas Watson, August 24: North End Stope: Two fathoms of the vein have been stoped out here at 3l. 19s. per fathom, yielding 1 ton 12 cwts. of ore. The north end cross-cut has been set to two men; during the month they have driven 1 fm., at 5l. 17s. per fathom; the ground is now softer and better to drive, and is now set to the same men for one month at 4l. 15s. per fathom; they have cut through several strings or small veins, all spotted with lead ore. Hopkins' level forehead has been set to two men for the month; they have cut 5 ft., at 4l. 14s. per fathom; the ground is now much harder to drive, and is set to four men for one month at 5l. 5s. per fathom; they have a strong vein, but not much ore to see in it to-day. Two men are at present engaged breaking up veinstuff and sending bouse out of the mine; they have been engaged with it 14 days, and have as much work as will serve them other three weeks.—Surface Work: During the month our surface men have been engaged repairing ladder-way, walling and arching in mine, and flagging at the flooring for buddles. The few lead ore dressers at work have been attending to mill grinding chatts, and dressing sludge.
TRELEIGH WOOD.—William Goldsworthy, Aug. 30: There is no change to notice in the mine since last week. Everything is being pushed on as fast as possible, and we hope to sell over 10 tons of tin on Saturday next.
VAUGHAN.—Aug. 29: In the deep level east the part of the lode carried is chiefly composed of a blue killas and branches of carbonate of lime containing spots of blende and lead ore. The rise over the 32 is communicated to the winze under the 20, which has greatly improved the ventilation, and laid open a productive piece of ore ground; the men are now placed to stope the roof of the 20, in which the lode is large, and yielding 1¼ ton of lead ore per fathom. At surface but very little progress has been made for the past fortnight towards the erection of machinery in consequence of such heavy floods of rain, which we hope will soon cease that we may with as little delay as possible complete the erection of our dressing machinery.
WEST ASSHETON.—J. Craze, J. Manley, Aug. 30: The lode in the 80, west of boundary, continues very promising, and yields good stones of lead, and lets out more water; judging from this and also from the fact that we are now entering under the run of orey ground driven through in the 60, we have every reason to expect a substantial improvement at this point, and that very shortly. No lode has been taken down in the 60 west since setting report, consequently we have no change to report at this point. All other points are much the same as last reported on. We purpose sampling a parcel of lead ore to-morrow for sale on September 7.
WEST GODOLPHIN.—Wm. T. Pope, Aug. 29: There is nothing new in the general working of the mine, we are having everything pushed on as fast as possible with the erection of the new engine; for three or four days past the weather has been very wet, which has retarded our progress, but I am glad to say the weather is fine again to-day.
WEST ROSKEAR.—H. Stephens, W. Bennetts, Aug. 30: We have cut the necessary ground for the lift, put on a 9-ft. pump, and the sumpmen have commenced clearing the shaft below the 12 fm. level; it is full of stuff so far as seen, but we hope soon to get through the choke. Another week's work will prove this. The ground in the 12 fm. level end west is much easier for driving, and the lode is improved in size since our last report, with more ore in it; it is a very promising lode indeed.
WEST TANKERVILLE.—A. Waters, Aug. 30: The 86, south of shaft, is in a lode 1½ ft. wide, worth 7 cwts. of lead ore per fathom. The winze in the 75, just in front of the 86 end, is down 8 ft.; lode yielding stones of lead ore. The 75 south is in a lode 6 ft. wide, worth 12l. per fathom for lead ore. The stope in the 75, south of winze, is worth 1 ton per fathom. The stope north of winze is worth ½ ton per fathom. The 63 cross-cut is not yet into the east lode. The stopes in the back of this level, two in number, are each worth 1 ton of lead ore per fathom. The rise above this level is worth 1 ton per fathom. The stope in the back of the 50 south is worth 1 ton per fathom. The 35 tons of lead ore sold to-day realised 413l. 17s. 6d.
WEST WHEAL TOLGUS.—Aug. 29: Taylor's Shaft: The casing and dividing has been completed below the 135, and we are drawing from the 145 with the steam-whim. The ground in cutting the plat at the 145 is without alteration—still hard. The lode in the 145, west of the cross-course, is 5 ft. wide, yielding 5 tons of ore per fathom, and letting out plenty of water. The lode in the 135 west is 6 ft. wide, yielding 3 tons of ore per fathom. The lode in No. 5 winze under the 125 is 6 ft. wide, yielding 4 tons of ore per fathom. The lode in the 125 west is 2 ft. wide, yielding 3 tons of ore per fathom. The stopes are quite up to last week's report: we need not fear of much falling off from them for some time to come.—Richards' Shaft: We are making fair progress in sinking, and the lode continues large, with a little ore. The lode in the 75, west of shaft, is small and poor. The lode in the 65 west continues small; the same may be said of the other ends at this shaft. On the whole, things are looking quite up to the report presented last week at the account meeting.
WHEAL CREBOR.—John Andrews, Aug. 28: In the 120 east we have just commenced to take down the south or main part of the lode, which is 4 ft. wide, and worth fully 20l. per fathom. The lode in the stope in the back of the 120 is worth 10l. per fathom. In the 108 east we are driving by the side of the lode. The lode in the west stope in the back of the 108 is worth 12l. per fathom. The lode in the east stope in the back of the same level has improved, and is also worth 12l. per fathom. The 72 east is poor. The lode in the 48 east has a promising appearance, and yields more mundic and good stones of ore.
WHEAL GRENVILLE.—T. Hodge, Aug. 29: Western Shaft: In the 150 east the main part of the lode is standing to the north, the value of which is not known. The 130 east end is worth 7l. per fathom. The 130 west end is worth 7l. per fathom. The north shaft is down 7 fm. 1 ft. below the 140; on the whole, fair progress is being made here. The 140 west end is worth 7l. per fathom. The 130 east end is worth 9l. per fathom. I see no change in the stopes worthy of any remark. I intend to start the 160 east end next week with a full pare of men. The mine is drained to the bottom, and all the machinery working well. During the past week the wet weather has rather retarded our progress at surface; however, everything is being pressed forward so fast as the weather will admit. The masons are building the loading for the steam capstan, &c.
WHEAL KITTY (St. Agnes).—S. Davey, R. Harris, Aug. 25: New Shaft, Pryor's Lode: We have met with nothing as yet in the rise in the back of the 154. The lode in the 142, driving west of shaft, is 4 ft. wide, and worth for tin 9l. per fathom. The lode in the 142, driving east of shaft, is producing rich stones of tin. We hope as soon as we get out of the influence of the crossing to report an improvement at this point. The lode in the 130, driving west of shaft, is 2 ft. wide, and worth for tin 9l. per fathom. The lode in the 118, driving west of shaft, is 2½ ft. wide, and worth for tin 8l. per fathom. The lode in the 90, driving west of shaft, is 2 ft. wide, and worth for tin 6l. per fathom. The men are making good progress with taking down the ground in the bottom of the 65 east and west of rise.—Old Lode: The lode in the 100, driving west of engine shaft, is 2 ft. wide, and worth for tin 9l. per fathom. The lode in the 90, driving east of shaft, is producing average quality tinstuff for the stamps.
WHEAL NEWTON.—H. Bennett, Aug. 30: We have cleaned up the engine-shaft and have set the 44 to drive west on the junction of the silver and the Harrowbarrow lode, to four men, at 3l. per fathom, which at the present time is presenting a splendid appearance, composed of carbonate of iron, prian, and spots of silver ore. We expect an early improvement at this point. We have also commenced to drive the 44 east of engine-shaft, by four men, at 3l. 15s. per fathom; this end is the same in character as the western end. Cook's shaft to sink below the 40, on the silver lode, by nine men, the month, at 12l. per fathom: the lode is composed of carbonate of iron, sulphur, mundic, prian, and spots of silver ore—a very promising lode. The 40 fathom level to drive east of Cook's shaft, on the silver lode, by six men, at 4l. 10s. per fathom; the lode is 1 ft. wide, yielding a little silver, with every appearance of an early improvement. The 40, to drive west of Cook's shaft, by six men, at 4l. 10s. per fathom, yielding saving work for silver. We have communicated the rise in the back of this level with the stopes in the bottom of the 30, which has ventilated this part of the mine. The 30, to drive east of Cook's shaft on the silver lode, by four men, at at 3l. 15s. per fathom; this lode has a very kindly appearance, and yielding a little silver. The 30 fm. level to drive east of the engine-shaft, on the silver lode, by two men, at 7l. per fathom, producing a little silver. We have put six men to drive north at the 30 fm. level, west of engine-shaft, as we think the main part of the silver lode is standing further north; the end is very wet.—Stoping on the silver lode: Two stopes in the back of the 40, east of Cook's shaft, by twelve men; the lode has much improved, and is looking well, yielding first-class silver ore. A stope in the bottom of the 40, east of Cook's shaft, by six men, yielding good work for silver. We have commenced to stope the back of the 40, west of Cook's shaft, by six men, yielding saving work; we expect as we reach the junction to have a good improvement. Two stopes in the bottom of the 30, west of Cook's shaft, by 12 men; lode looking well, yielding rich silver ore. A stope in the back of the 30, west of Cook's shaft, by six men, producing saving work for silver.—Harrow-barrow Lode: The 30 to drive west of engine-shaft, by two men, at 5l. 15s. per fathom; the lode is kindly, but nothing to value. The 10 to drive west of Cook's shaft, by four men, at 4l. 10 per fathom, producing a little copper and mundic. We have commenced to drive a cross-cut south at the 10, east of Cook's shaft, in order to intersect the south part of the lode.—Stoping: A stope in the bottom of the 30, west of Cook's shaft, by four men; worth 20l. per fathom. A stope in the back of the 30, east of Cook's shaft, by four men; worth 15l. per fathom. A stope in the back of the 20, east of Cook's shaft, by two men; worth 12l. per fm. —Hampton's Shaft: This shaft is sunk about 4 fms., but in consequence of the heavy floods we have had the last few days we have been obliged to stop, the water being so quick; but we hope, as soon as the weather gets fine, to be able to resume sinking, this being one of the most important points in the mine. I fully expect meeting with a good lode in a little while.
WHEAL UNY.—W. Rich, M. Rogers, J. Rich, Aug. 25: The lode in the 106 end west is worth 10l. per fathom. Hind's shaft, below the 16, is worth 15l. per fathom for the full length of the same. The 160 east is worth 8l. per fathom. The 150 west carries a little tin. The 150, east of King's, is worth 7l. per fathom. The 140 east is worth 8l. per fathom. The 130 east is worth 10l. per fathom. The back of the 60 west is worth 6l. per fathom.

CHEMICALS, MINERALS, AND METALS.—Messrs. J. Berger Spence and Co. (Aug. 29).—Acetate of Lime, 9l. 10s. per ton.—Alumina: Alum, el. 15s. for loose lump; ground, 7l. 15s.—Aluminous cake, 4l. 5s.—Ammonia: Sulphate, grey, 20l. 15s.; best London white, 21l. 5s.; muriate—white, 27l.; sal ammoniac, firsts, 45s.; seconds, 44s.—Acid: Tartaric, English, ground or crystal, 1s. 6d.; foreign, 1s. 5½d., crystals; oxalic, 5d.; sulphuric, 3l. 10s. to 3l. 15s.; picric acid, 1s. 6½d. per lb.—Arsenic: Best white powdered Cornish, 8l. 10s.—Bleaching Powder: At 5l. to 5l. 5s; for whole of 1877, 5l. 15s.—Litharge: Best flake, 23l.—Metallic Salts: Iron salts, green and rusty copperas, 55s.; in casks or barrels, 60s.—Copper Salts: Sulphate of copper, 22l. 15s.—Magnesia: Epsom salts, 3l. 5s.—Nitrate Soda: 14s. 6d. to 15s.—Potash: Muriates, 80 per cent., at 7l. 7s. 6d. f.o.b.; Prussiate, yellow, 10¾d.; chlorate, 8¾d.; bichrome, 4d.—Soda: Cream caustic, 60 per cent., 11l. 15s.; white, 60 per cent., 12l.; soda ash, 1¾d.; soda crystals, 4l. 10s.; bi-carbonate, 10l. 10s.; salt cake, 2l. 15s.; Glauber salts, 2l. 15s. —Sugar of Lead: Brown, 26l.; grey, 30l. 10s.; white, 37l.—Brimstone: Best thirds, 5l. 7s. 6d. to 5l. 10s.—China-clay: 15s. f.o.b. Cornwall; "Rosemellyn," 24s.; "BM," 34s.—Gypsine: Crude, 2l. 6s. to 3l.; calcined, 4l. 10s. to 6l.—Iron Ore: Hematite, 15s. to 22s. 6d.; Algerian, 53 per cent., 14s. f.o.b.—Manganese: Ores, 85s. to 90s. for 70 per cent.—Pyrites: Spanish cupreous, 5½d.; non-cupreous, 6¾d.—Phosphate of Alumina, 3l. to 3l. 10s. per ton.—Phosphates: High strength, 80 to 85 per cent., 1s. 4d. to 1s. 5d. per unit; Estramadura, 1s. 3d.; ordinary, 60 per cent., 1s.; precipitated phosphate of lime, 70 per cent., 5l. 15s.—Iron: Middlesborough Pig-iron, No. 1, 45s.; No. 3, 40s.; No. 4 (foundry), 39s. 6d.; No. 4 (forge), 39s. net.—Hematite, No. 1, 67s. 6d.; No. 2, 67s. 6d.; No. 3, 64s.; No. 4, 64s.; No. 5 (mott and white), 62s. 6d.—Bessemer, No. 1, 67s. 6d.; No. 2, 67s. 6d.; No. 3, 64s., less 2½ p.c.—Scotch warrants, 54s. 9d.; Scotch, g.m.b., No. 1, 52s. 6d.; No. 3, 50s. 6d. net.—Copper: Chili bars, 68l.; B.S. ingot, 77l. 10s.; tough cake, 75l. 10s.—Lead: Best English soft pig, 20l. 5s.; German soft pig, 20l. c.i.f., Liverpool or London—Spelter: Silesian, 20l.; English, 19l. 15s. on rails, makers' works.—Tin: Straits, 65l.; Australian, 64l.; British, 70l.—Tin-Plates: Best charcoal, 26s.; charcoal, 25s.; best coke, 23s.; coke, 22s.—Tubes and Fittings: Dis. on application.

COPPER ORES.

Sampled Aug. 8, and sold at the Royal Hotel, Truro, Aug. 23.

Mines.	Tons.		Price.		Mines.	Tons.		Price.	
Devon Great Consols...	93	.....	£1	13 6	Marke Valley	65	.....	£2	4 6
ditto	85	.....	1	17 0	ditto	61	.....	3	7 6
ditto	84	.....	1	13 0	ditto	47	.....	3	13 6
ditto	83	.....	1	12 0	ditto	31	.....	2	3 6
ditto	80	.....	4	18 0	ditto	30	.....	1	7 6
ditto	76	.....	4	5 0	Glasgow Caradon	78	.....	4	14 0
ditto	75	.....	4	5 6	ditto	72	.....	4	9 0
ditto	73	.....	1	13 6	ditto	65	.....	4	10 6
ditto	67	.....	1	13 0	ditto	35	.....	2	4 6
ditto	61	.....	1	14 0	Gawton	71	.....	1	8 6
ditto	52	.....	1	12 6	ditto	60	.....	2	2 6
ditto	46	.....	4	18 6	ditto	56	.....	1	15 6
South Caradon	85	.....	3	9 0	ditto	38	.....	1	12 0
ditto	69	.....	3	1 0	Hingston Down	73	.....	2	3 6
ditto	65	.....	3	3 6	ditto	51	.....	1	9 0
ditto	56	.....	5	14 6	ditto	50	.....	2	3 0
ditto	52	.....	5	13 6	Phœnix	60	.....	2	19 6
ditto	51	.....	8	14 0	ditto	40	.....	1	10 6
ditto	49	.....	8	15 0	ditto	38	.....	5	16 6
ditto	43	.....	4	2 6	West Maria & Fortescue	79	.....	2	6 6
Marke Valley	80	.....	2	11 6	ditto	19	.....	1	9 6
ditto	66	.....	2	13 6	East Caradon	60	.....	3	13 0

TOTAL PRODUCE.

Devon Great Con.	875	.....	£2267	12 6	Hingston Down...	174	.....	£ 340	4 6
South Caradon	470	.....	2375	12 0	Phœnix	138	.....	480	17 0
Marke Valley	380	.....	1014	9 0	West Maria, &c....	98	.....	211	14 0
Glasgow Caradon.	250	.....	1059	0 0	East Caradon	60	.....	219	0 0
Gawton	225	.....	388	17 6					

Average standard ..... £ 96 16 0 | Average produce 6
Average price per ton £3 2 6
Quantity of ore ..... 2670 | Quantity of fine copper 161 tons 19 cwts.
Amount of money £8337 6 6
LAST SALE.—Average standard ..... £ 90 14 0 | Average produce 8
Standard of corresponding sale last month, £ 99 7 0—Produce, 6¾

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	669½	£18:6 12 0
Grenfell and Sons	395	1641 14 3
Nevill, Druce, and Co.	368	887 4 9
Williams, Foster, and Co.	778½	2289 0 0
Charles J. Lambert	459	1682 14 0
Total	2670	£8337 6 6

NO SALE on Thursday last, Aug. 30.
Copper ores for sale on Thursday next, at Tabbs Hotel, Redruth.—Mines and parcels—Mellanear 440—West Wheal Tolgus 491—West Wheal Seton 326—East Pool 207—South Wheal Crofty 180—Levant 160—Carn Brea 78—Killifreth 77—West Wheal Basset 41—North Treskerby 37—South Condurrow 19—Poldice 18—South Tolcarne 17—Dolcoath 16—Wheal Uny 8—Sedgman's Ore 2—Total, 2027 tons

COPPER ORES.

Sampled Aug. 15, and sold at Swansea, Aug. 28.

Mines.	Tons.	Produce.	Price.		Mines.	Tons.	Produce.	Price.	
Betts Cove	120	10	£3	14 6	Var Ore	97	11¼	£8	18 6
ditto	120	10	5	13 0	ditto	97	11¼	8	15 0
ditto	120	10	5	13 6	Berehaven	108	8	4	10 6
ditto	120	10	5	14 0	ditto	48	8½	4	11 0
ditto	115	11	6	5 0	ditto	24	9½	5	10 0
ditto	115	11	6	9 6	Aljustrel	81	5½	2	14 0
ditto	112	8½	4	15 0	ditto	81	5

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, AUG. 31, 1877.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 14 3-	—
,, Scotch, all No. 1 ...	2 16 0-	3 10 0
Bars, Welsh, f.o.b. Wales	5 10 0-	5 12 6
,, ,, in London.	6 0 0-	6 2 6
,, Stafford., .	7 10 0-	8 15 0
,, in Tyne or Tees ...	5 10 0-	6 0 0
,, Swedish, London ..	9 10 0-	10 0 0
Rails, Welsh, at works..	5 0 0-	5 5 0
Railway chairs	— -	—
,, spikes	— -	—
Sheets, Staff., in London	8 15 0-	9 0 0
Plates, ship., in London	7 5 0-	7 10 0
Hoops, Staff.	7 12 6-	8 0 0
Nail rods, Staff. in Lon.	7 5 0-	7 12 6

STEEL.		
English, spring	..16	0 0-20 0 0
,, cast	35	0 0-45 0 0
Swedish, keg.....	..16	0 0- —
,, fag. ham.	..17	10 0- —

LEAD.		
English, pig, common .	19 17 6	20 0 0
,, ,, L.B. nom.	20 5 0	—
,, ,, W.B.	21 0 0	—
,, sheet and bar..	21 0 0	21 5 0
,, pipe.....	21 10 0	—
,, red	22 5 0	22 10 0
,, white	27 5 0	28 0 0
,, patent shot ...	24 10 0	—
Spanish.....	..19 12 6	19 15 0

QUICKSILVER.		
Flasks of 75 lbs., ware.	9 0 0	(nom.)

SPELTER.		
Silesian or Rhenish ..	19 5 0-	19 10 0
English, Swansea.....	21 0 0-	—
Sheet zinc	22 10 0-	24 10 0

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	68 10 0-	69 0 0
,, bars ,, ...	69 10 0-	70 0 0
,, refined.....	71 0 0-	—
Australian	63 15 0-	—
Banca	68 0 0-	69 0 0
Straits	65 0 0-	—

COPPER.		
Tough cake and ingot.	74 0 0-	75 0 0
Best selected	76 0 0-	76 10 0
Sheets and sheathing .	79 0 0-	80 0 0
Flat Bottoms	82 0 0-	83 0 0
Wallaroo	80 0 0-	80 10 0
Burra, or P.C.C.	75 0 0-	75 10 0
Other brands	74 10 0-	76 0 0
Chili bars, g.o.b.....	67 10 0-	—

PHOSPHOR BRONZE.		
Bearing metal	£112	0 0
Other alloys	£120 0 0-	140 0 0

BRASS.		
Wire	8d.	- —
Tubes.....	10	- —
Sheets	9	- —
Yel. met. sheath. & sheets.	6¼	- 7½
Nails composition.....	8¾	- 9¾

TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	1 2 6-	1 3 6
,, 2nd quality...	1 1 0-	1 1 6
Coke, 1st quality	0 19 6-	—
,, 2nd quality	0 17 6-	0 18 0
Black .....per ton	16 0 0-	16 10 0
Canada, Staff. or Gla.., at Liverpool	12 0 0-	13 0 0
Black Taggers, 450 of 14 × 10	30 0 0-	—

REMARKS.—The unsatisfactory state of affairs generally, and the critical state of political affairs in particular, continue to exercise a very depressing influence over our markets, and the amount of business transacted for shipment, home consumption, and speculation in all is extremely limited, but, considering the gravity of the situation, there is, perhaps, cause for congratulation that our markets on the whole are no worse; nevertheless, the uncertainty which exists about the future requires the greatest caution to be observed in all operations of any magnitude. For some time past the markets have been in a declining state, and there has been no opportunity for speculation, and the present time appears as unfavourable as the past, and the future is likewise equally discouraging; it will, therefore, probably be found more advantageous to leave the markets alone, and let them take their own course uninfluenced by any speculative action. Moderate fluctuations in prices, however, if rightly directed, are beneficial to our markets, and it would be unfortunate for the interests of the trade at large were they less frequent; in fact, it would be better were they more frequent, and we should be happy to see every encouragement given to reasonable fluctuations, as they exercise a salutary influence, and promote the business of the Exchange.

Our markets would very soon fall into a hopelessly stagnant condition were it not for the continual oscillations they undergo, and the renewed strength they acquire by each successive vibration. But there are certain periods when the trade falls into a peculiarly sensitive condition, and cannot bear the least interference; and it is on such occasions that more than ordinary care is necessary, so as not in any way to injure the demand, and it should always be a matter of the first consideration to ascertain whether the markets will admit of any alteration, and, if so to what extent? because if a movement is prematurely attempted, it will not only bring defeat upon its promoters, but disaster upon the market. A temporary advantage at the expense of a permanent injury should not be indulged in; and no support should be given to any movement unless there are legitimate reasons for concluding that the contemplated change would probably have the effect of stimulating the demand. Our market has been free from any violent fluctuations, consequently the losses have been confined to a few, and not so serious as they might otherwise have proved; and we have done our utmost on every convenient occasion to warn the trade of the decline that would inevitably ensue, and we are happy to say that the speculative element has been wisely kept within bounds, and there is very little to fear yet awhile of speculation becoming so rampant as to unsettle the regular course of business. Speculation, however, is not unwelcome at any time, provided that speculators are not over-reaching; but when that is the case it is mischievous, and an obstruction to trade. A little diversion, such as we have lately experienced in tin, revives the drooping feeling, even though it lasts but a few days, yet it does good by keeping buyers constantly on the alert, and when speculation becomes general it is a good sign, for it shows confidence, and frequently makes a market where there would otherwise be none; but to be successful, speculators must be scrupulous in the selection of an opportune moment, and not speculate at random. It is also better that it should accompany and not precede the legitimate demand, for without adequate support it must result in failure, as fictitious prices only induce additional supplies, without finding or facilitating an outlet for them.

The accumulation of stocks in our market is doubtless caused by the prices being maintained too high for an unreasonable length of time, and the consequence is that we are now overburdened and liable to a very serious depreciation in the event of any catastrophe happening, such, for instance, as England taking part in the Turkish war, extreme stringency in the money market, a revolution in France, or an other event of an alarming character. But what inducement is there for speculation with the unusually heavy risks a-head? We answer none, and we are sure it will be found much better to wait until the course is cleared of some of the existing evils before making any considerable venture. The recent advices of the extension of the famine to districts in China, Corea, Northern Africa, and South America, add to the numerous other calamities at present operating against the expansion of commerce, and is only another convincing reason for abstaining from speculation. Quietude should be the order of the day, but holders should have every chance afforded them of getting out some of the superfluous stocks, and realising as best they may. Prices will doubtless recede fast enough without any undue pressure, and although it is plainly not a time to speculate for a rise, it would also be as well that "bearing" operations should not be resorted to immediately.

COPPER.—The prices of Australian have been steadily maintained, and the principal holders evince no disposition whatever to make concessions, and this may be taken as a proof of their ability and an earnest of their intention to adhere closely to quotations. Burra is still absurdly cheap in comparison to Wallaroo, and on that account alone it is deserving the special notice of consumers. At the half yearly meeting of the English and Australian Copper Company the Chairman remarked that "Burra was more pure than Wallaroo." We always entertained a high opinion of its intrinsic merits, and now there is corroborative evidence of the fact, for the Chairman, in the course of his speech, further stated that "analyses and every other test had proved that the two coppers were perfectly equally in value, if, indeed, they did not show that the Burra was slightly superior." Chili bars have shown a declining tendency, and cash and three months parcels have been sold at 67*l.* 10s. and 68*l.* respectively. By the mail leaving Valparaiso on July 13 it was reported that "in view of the continual dulness on consumption markets purchasers did refuse to pay firmer prices, obliging holders to make concessions. Prices for coast brands have receded from $16·40 f.o.b. to $16·22½. On the spot no transactions have been effected—quotations are nominal. Transactions since the 20th ult. amount to 4414 quintals Lota bars, at $16·40 f.o.b. Lota with 60s. freight per steamer, 1103 quintals. Urmeneta at $16·40 f.o.b. Tongey: 3000 quintals Vicuno at $15·50, f.o.b. Totoralillo; 2207 quintals Lambert, at $16·30, f.o.b. Coquimbo; 2800 quintals Chanaral, at $14·22½; 2800 quintals Cora, at $16·12½, f.o.b. Caldera; 3537 quintals g.o.b., at $16·2½, f.o.b. Caldera; 2750 quintals Urmeneta, at $16·30, f.o.b. Guayacan; 2800 quintals Urmeneta, at $16·30, f.o.b. Tongey; 1600 quintals of regulus, at 37·20, 50 per cent. f.o.b. on the coast. C. and F. of 1 ton English, Exchange 41½d., $16·30, f.o.b. on the coast, freight by steamer to Liverpool, 60s.—equal to 67*l.* 12s. 1d.

By the mail from New York, on the 18th inst., we learn that both copper and yellow metal are quiet, and the small sales making are on the basis of previous quotations. We note sales of 100,000 lbs. of cake, at 18¼ cents cash. Sheathing is quoted 28 cents, and bolts and brazing 30 cents; yellow metal sheathing 20 cents, and bolts 25 cents; nails 20 cents. By the mail from Bombay, on the 2nd inst., it is stated that copper is dull, at some decline, and yellow metal has given way fully R 1 per cwt. Madras market is very dull, and no orders coming forward. Calcutta is least affected, and will probably not suffer to the same extent as the other Presidencies; but we are afraid there will be a very serious falling off for the next few months from all the Indian markets, and that orders for 4 by 4 sheets will not be obtainable unless sellers can offer a great inducement upon present quotations, which, of course, almost entirely depends upon the price of the raw material. There will, consequently, be very slight support given to the Chili market at present rates, for, with such bad prospects for manufactured, smelters are not likely to be buyers of Chili bars in any considerable quantity, and holders will either have to give way in price to effect sales or remain in possession of their stocks; but, as the latter course has often been found unprofitable, and particularly so within recent periods, it is not so likely to be repeated; besides, smelters may for some short time be indifferent to what holders of bars may do, as there is a large quantity of ores to be brought forward for sale in the early part of next month, and, therefore, they will probably get fully supplied with furnace material at reduced prices.

There is so little business passing at the present time that prices must be considered nominal, because in the event of any large quantity of copper having to be realised the market might be considerably affected, and we firmly believe that lower rates will yet follow, and that holders could best study their interest by realising at once. No improvement seems possible, for buyers appear to have lost all confidence in the stability of the market, and they are persuaded that lower prices must soon prevail, and were any orders to be received buyers would hesitate about giving them out, consequently the sooner the fall comes the better, as the market might rally again upon an increased demand. The only manner in which the Indian orders will be procured is by quoting low, and if this is found to be impractical sulpments will be suspended, but what will be the effect in that case? The smelters will not buy if they cannot sell the manufactured, and stocks must, therefore, accumulate once again, and however strong holders may be yet if statistics are continually going against them they will be sure to have to yield in the end; but, in addition to the diminished demand, there is the possibility of dear money. Our home harvest is deficient, and money will have to be sent to America for corn, and if any extra strain should take place for the Continent the Bank rate may again be suddenly advanced. The position of the market, to say the least, is unsatisfactory, but it cannot go on much longer without some change being made, and some are of opinion that during the next fortnight prices will further recede. To day there are sellers of g.o.b. Chili bars at 67*l.* 10s.

IRON.—The threatened disturbances in this trade have passed over, and the masters and the men have very wisely effected a compromise, the men agreeing to submit to a reduction of 6d. per ton in their wages. Disputes in trade at any time rarely benefit either side, and the interest of all would be always more advanced by arbitration than by strikes and lock-outs. It is extremely fortunate for the working classes that a settlement this time has been arrived at, for a lock-out of 40,000 miners would have affected a much larger number of men employed in other ways, and as the winter season is approaching the severity of the trial would have been felt with unusual rigour, especially as our harvest is now known to be deficient, and we shall have to import corn considerably from America. The price of bread is an important item in household expenses now that employment is scarce, and the price of the loaf is already about half as much again as it was last year; it will be a very serious matter for the working man should the price rise any higher, and yet there is every probability that it will do so. The concession on the part of the miners on this occasion is very commendable, and we hope they will be guided by wiser counsels in future than they have been hitherto, but they have evidently taken a manly view of the case this time, and surrendered with good grace. We are sure their determination will meet with general approval, and receive the best wishes of their best friends and supporters. We congratulate the men upon being able to retain their employment, and we hope they will soon obtain such an increased amount of work as will fully compensate them for the reduction.

The men have shown a noble example in submitting to a sacrifice when circumstances demanded it, and since by this action the position of the masters has been somewhat relieved, they, on their part, have reduced the list prices of their iron. Therefore, the leading sellers in the trade, instead of appropriating to themselves the advantage which the reduction of wages afforded them, they have graciously come forward and bestowed the full benefit upon the public, and there can be little doubt that this mutual good action on the part of masters and men will be equally responded to by the British and foreign buyers whenever they are able to do so. If this sort of forbearance and support were more universally adopted a great part of the distress and misfortune that often prevail in many of our mining and manufacturing districts would be prevented; but, what is better than anything else, a kind and good feeling would exist between employers and employed, and that would be infinitely better than masters trying to oppress the working man, or the working man attempting to extort more than his due. We hope that this arrangement may pave the way for a more orderly state of things in the future, and when the masters feel that the state of trade necessitates some reduction the men will always show themselves ready and cheerful to acquiesce in such alterations. Nothing would be so welcome as to know that this will be the minimum reduction required of the men, and possibly it may be found sufficient for a little while, but there are so many evils at work just now that it is quite impossible to say that no greater sacrifice will be needed. The Belgian masters are ruining our trade in common iron, and we cannot afford to suffer this. Whatever they can do we ought to be able to do as well and as cheaply. We possess all the advantages of steam and locomotion, and capital and material, and everything that is required and essential to success; we ought, therefore, to be able to hold our own against all comers, and cheapness and quality must be united in recovering that trade for us which we have lost, and in upholding that which we possess. Scotch pigs have been less firm, and the price of mixed numbers has declined at 5s. 3d. cash, and 5s. 6d. one month.

SHIPMENTS.

Week ending Aug 29. 1876	Tons	10,550
Week ending Aug. 28, 1877		8,480
Decrease		2,070
Total increase for 1877		9,433
Imports of Middlesborough pig-iron into Grangemouth:—		
Week ending Aug. 25, 1877	Tons	5,349
Week ending Aug. 26, 1876		3,663
Increase		1,677
Total increase for 1877		47,479

FURNACES.

In blast Aug. 18, 1876	115
In blast Aug. 18, 1877	87

LEAD.—There has been no change in this metal; the demand keeps very quiet, but prices are steady, and the HB brand is held for 20*l.* 5s.

SPELTER.—Sellers have submitted to a slight concession, and Silesian is now quoted down to 19*l.* English at Swansea is obtainable at 19*l.* 5s. At public sale yesterday 120 tons of zinc was sold at 22*l.* 15s. 6d. net, or the same price as last realised.

QUICKSILVER.—On Tuesday importers advanced their price of Spanish to 9*l.*, but this has been quite nominal, for the whole of the week second-hand parcels have changed hands at 8*l.* and 8*l.* 5s., and no active demand at these rates. By the mail from New York of August 18, the price quoted there was 59½ c. to 60 c. gold, and the news from San Francisco states that the stock on the spot was very light, and receipts very meagre, but there was little doubt that the recent advance of 20 c. per pound would again stimulate production, and induce those parties who have put out their furnaces, or stopped the reduction of rich ores and confined their operations to low-grade ores, to at once fire up to their full working capacity, smelting their richest cinnabar ores, in order to take advantage of current prices. Closing price, 57½ c., dull and nominal. The receipts of quicksilver for the first week in August amounted to 1975 flasks. The total number of bottles received from January to July is 42,292, against 34,511 in 1876, or an increase for this year of 9781 bottles.

TIN-PLATES.—In fair request, and prices steady. Makers must be doing much better now that both tin and iron are so much cheaper. The New York market keeps fairly steady. The demand being moderate, and prices unchanged, IC charcoal tin are quoted $6 62½; IC coke, $5·75 to $5 87½; IC charcoal terne, $6 to $6·25; and IC coke terne, $5 50 to $5·62½ gold.

STEEL.—There is no improvement in this metal, and the Sheffield accounts are, if anything, worse than before. The Russian war has nearly put a stop to the execution of orders for Russia, and the American orders are very few. The continental demand is also light.

TIN.—Our market has been somewhat variable, and prices at one time advanced to about 64*l.* 10s. for Australian, but from this point it quickly receded to 63*l.* 10s., and one transaction was effected at 63*l.* 5s., with two months' prompt; but since then, 63*l.* 15s. has been realised. There is still, however, a very unsettled look about the market, and prices may be a little uncertain for awhile. Consumers are fairly supplied, and cannot be tempted into buying more than they require for current purposes. The supplies continue very large, and rather in excess of requirements; but the reduced value will probably stimulate consumption in course of time, provided it is not impeded by the action of tin-plate manufacturers, and if the price should go very much lower a considerable increase may be expected. There are, no doubt, many purposes for which tin could be applied, if the price generally ranged between 50*l.* and 60*l.*, but which hitherto have not been thought of on account of its previous dear price, but a cheap price may be the means of opening up many fresh outlets, and the additional supplies may, after all, not exceed future wants. If Tasmania and Australia possess such rich deposits of this metal as it is reported of them, and that it can be sold to pay a very handsome profit, even below current quotations, then there is no reason why it should be withheld, and there can scarcely be a question in regard to the enormous quantities in these regions, otherwise the owners of these mines of wealth would not have pressed on us so much for sale in the beginning; and we may therefore safely calculate upon there being plenty to follow as fast as it can be conveniently raised and smelted. The over-production undoubtedly affects the price, but it will also affect the supplies from numerous other sources, and that will ultimately turn to the advantage of the Australians, as it will enable them to get their tin into more general consumption.

There is still an impression in the minds of some holders that prices may recover as quickly as they have declined, but we think the impression is a very erroneous one, and such as is likely to lull them into a false security, and for this reason that Australia and Tasmania are only beginning to develope their resources, and as their roads get formed and the means of transit is increased and thorough organisation established the supplies instead of showing any falling off, will on the other hand, vastly increase, and the consumers must prove themselves in some manner equal to the occasion, for if makers do not manufacture sufficiently cheap to extend the demand there will be tin-plate works and other factories growing up in the colony and superseding them. We trust that sellers will do all in their power to produce the manufactured article at cheap rates, and that the public should be enabled to benefit by them, for the articles of domestic use amongst the poorer classes would be immensely increased if the retail prices were only half the former rates, and there ought to be no difficulty about it with the raw material below half its former value. The advices from Rotterdam report the demand as sluggish. Banca quoted 40 fl.; Billiton, 38 fl. By the last mail from Penang, July 28, the market was stated to be steady, with a good demand for India and China; prices, however, have fluctuated, and closed slightly weaker. For Europe and America there was no demand, prices being prohibitory. The market opened at $19 per picul, equal to about 71*l.* 10s., but at the close 70*l.* 10s. was accepted coastwise and foreign.

Again our market to day has shown a little excitement over the price, but the differences between buyers and sellers' views prevented business resulting to any extent worth recording. The stock for the month has just been made up, and shows an increase of over 400 tons. The deliveries here have not been very good, being under 800 tons; but in Holland they are rather large. The tendency of prices, we think, will ere long turn again in favour of buyers; at any rate, it would be safer for consumers not to stock next month, but wait and see the result of the month's business. The time will be drawing near for the French elections, and if any disturbances are likely to take place on the Continent it will, perhaps, transpire by the end of September. The result of the harvest will be more generally known, the value of money decided, the probabilities of the war and the extent of the famine ascertained. With so many different, difficult, and important matters remaining in abeyance, it would be better not to make extensive operations; if any rise could be effected it would probably be trifling, with stocks increasing the chances are more in favour of a fall.

THE IRON TRADE—(Griffiths's Weekly Report).—Friday Evening. The Glasgow market opened flat this morning; warrants were at 54s. 3d. This afternoon the market was firmer, with buyers at the close at 54s. 5d., a fall since last Friday of 7d. per ton. We quote makers' No. 1 iron:—Gartsherrie, 63s.; Coltness, 67s 6d.; Carnbroe, 62s. 6d.; Langloan, 64s.; Summerlee, 60s.; Monkland, 57s. f.o.b. Glasgow; Clyde, garnock, 60s. 6d.; Eglinton, 56s. f.o.b. Ardrossan; Shotts, 61s. f.o.b. Leith; Calder, niel, 56s. 6d. f.o.b. Bo'ness. At a meeting of the Staffordshire iron-masters, held at Birmingham, yesterday, marked Staffordshire bars were reduced 10s. per ton. The price now is 8*l.* 10s. per ton for BBH, the Mitre, John Bagnall and Sons, Sumner Hill, Brown and Freers, Lee and Boltons and other leading houses. The Earl of Dudley, 9*l.* 2s. 6d. Best native brands of pig iron are reduced 5s. per ton. The collier's wages being settled, there is no fear of a strike in this district. The Earl of Dudley has issued a circular to-day reducing the price of coal 2s. per ton. The general opinion on the Birmingham Exchange yesterday was that Mr. Thomas to-day and the other delegates had acted judiciously, and with great ability and consideration in the advice promptly tendered to the colliers in this trying crisis. The iron trade in Staffordshire. Our markets look better to-day, and although we have no great activity to report, the reduction in Staffordshire bars is looked upon as a move in the right direction. The sheet-iron trade continues the most active department. We have no large contracts to report, however, in iron or steel this week. Export orders are not freely given out, although enquiries are general for nail rods and other kinds. There is no change to note in metals. The continues weak. Australian has been done at 63*l.* 10s.; spelter, 19*l.* 10s. The Middlesborough market was flat on Tuesday; prices weaker and oscillating. coast pigs are firm. Staffordshire best mine, 5s. per ton lower.

Messrs. BROOKER, DORE, and Co. - No further advance has taken place in pigs, although it is now a fortnight since one-third of the furnaces were put down. The rise, however, which was caused by the anticipation of a reduction, has been partially maintained, and warrants close at 3d. higher than the quoted in our last issue. In finished iron there has been more doing, but this have been owing to the threatened strike of the colliers, and the fear on the of buyers that supplies might be stopped. It is satisfactory to hear the threatened strike has been averted by a compromise, the colliers agreeing cept 6d. and 3d. per day reduction respectively for the thick and thin coal Consequent upon this arrangement with the men the Earl Dudley has notices reducing coal 2s. per ton. It is supposed that this will bring about duction in the price of marked bars. Another labour difficulty is virtually at the Clyde shipbuilders having opened their yards to the men who now promise abide by the arbitrators' decision; the termination of this lock-out will favour affect the demand for plates in the North.—TIN-PLATES.—No change to —GALVANISED IRON in good demand, and prices are somewhat firmer. COPPER.—Dull market —TIN quiet. Straits quoted at 65*l.* 10s. Australian 64*l.*—SPELTER.—Quiet market.

Messrs. FRY, JAMES, and Co.—COPPER; The market has been exceedingly dull during the past fortnight, and prices in some instances have declined. Chili have been dealt in to but a small extent at gradually drooping prices, the fall during the fortnight having amounted to about 20s. per ton. The charters for first half of August are telegraphed at 1400 tons. In Australian sorts prices maintained, but the amount of business passing is very small. The imports from Australia this year will probably show a considerable decrease compared previous years, such decrease making itself most apparent in the Wallaroo. —TIN: We have to note a still further reduction.—LEAD is also more in favour.—IRON remains without change. Scotch pigs closed yesterday at 54s.

At Swansea Ticketing, on Tuesday, 2373 tons of copper ore sold, realising 17,846*l.* 7s. The particulars of the sale were Average standard for 9 per cent. produce, 82*l.* 9s. 9d.; average produce, 12⅝; average price per ton, 7*l.* 10s. 5d.; quantity of fine per, 300 tons 6 cwts. The following are the particulars of two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore
Aug. 14.....	1854 ...	£ 83 11 6	... 8 13 16 ...	£ 5 3 0	... 11s. 8¼d...	£ 5
Aug. 7	2373 ..	82 9 9	... 12⅝ ...	7 10 5	... 11 10½ ...	5

Compared with the last sale, the decline has been in the standard 1*l.* 2s., and in the price per ton of ore about 2s. 8d. Messrs. Richardson and Co. report that the Betts Cove ore gave a produce of 10 1-16, and sold at 11s. 5d. per unit; Cape produce 29½, per 12s. 7d.; Union, produce 5¼, per unit 10s. 5d.; Berehaven, produce 8 3 16, per unit 11s. 4¼d. On Sept. 11 there will be offered for 3624 tons, from Union, Cape, Betts Cove, New Quebrada, Algodonales, Cavera, Berehaven, Cronebane, and elsewhere.

The settlement of the fortnightly account in the MINING SHARE MARKET, which at one time occupied so much attention on the part of the dealers, was a very small affair this week, and showed an extremely limited amount of business transacted, either for speculation or for investment. Our quotations, as usual, are mostly nominal.

TIN MINES early in the week became a little firmer, owing to an advance in Straits and Australian tin, and to the fact that the smelters in Cornwall were giving 1*l.* per ton more for ore than the recognised standard, which seems to point to an advance at no distant date, but dulness soon reigned again, and the trifling advance in shares was not maintained. To-day the meetings of Tincroft and Carn Brea will be held in Cornwall, and it is possible the true state of the accounts of both mines may be elicited. Carn Brea are quoted higher than last week, and leave off 22½ to 25. Dolcoath, 23 to 24; South Condurrow, 7¼ to 7⅞; Tincroft, 10½ to 11½; Wheal Agar, 3¼; Wheal Grenville, 30s. to 35s; Wheal Uny, 10s. to 15s.; Wheal truthal, 5s. to 7s. 6d.

In COPPER MINES Devon Great Consols are quoted at 3⅞. Richards' shaft will be down to a depth of 300 fathoms in three months. No particular change in the mine this week. West Crebor, 1½ to 2; the lode has been taken down in the 120 east, is worth 20*l.* per fathom. Stopes in the back worth 10*l.* per fathom. Stope in the back of the 108 east worth 12*l.* per fathom. The stope is worth 12*l.* per fathom. South Caradon, 100 to 110. Tolgus shares keep firm, and leave off at 74 to 76. Parys Mountain 6s. to 8s.; some good copper ore has been broken from the 90 this week, which looks as though the lode were near at hand. shares are weaker, owing to the delay in the holders taking Morfa-du. Prince of Wales, ⅛ to ⅜; at the special general meeting held on Thursday, 1340 shares were forfeited, and the company consists of about 5192 shares. At the adjourned meeting held afterwards the Chairman reported that he had not been able to see parties connected with Wheal Newton, as the principal was absent. The silver lode in the Prince of Wales had, however, been examined and tested; the result was that a sample of the stuff from the deep adit, 24 fms. from surface, yielded 177 ozs. silver to the ton. There is another adit, the agent reported, 15 fathoms deeper than this, and the silver lode can be worked without machinery at little cost for several hundred fathoms in length. At Wheal Newton the agent states that he heard from one point in one night they had raised silver to the value of 1000*l.* The meeting was further adjourned for a month, and the general feeling seemed to be that it would be better to raise capital and work the silver by a limited company if a satisfactory sale could not be effected. East Carn Brea, ⅛ to ⅜. Tolgus United, 5 to 5½; a favourable report was presented to the meeting on Thursday.

The fall in the price of lead seems to have affected the prices of shares in LEAD MINES, but this is looked upon as merely temporary. The failure of one or two prominent buyers a few months ago has thrown the trade into the hands of a few smelters, who seem to dictate prices and keep them down when there is no particular demand for lead. Roman Gravels, 9¼ to 9½; the 106, north shaft, is worth 2 tons of lead per fathom; the 106 south, 1 ton per fathom. Tankerville, 6¼ to 6¾; the sale of lead ores for the month, 100 tons, realised 12*l.* 6s. per ton, or 1230*l.*; the 190 east is worth 2 tons per fathom. Vans are quoted lower, but without any sales that we are aware of, 31 to 33. East Van, 4¼ to 4¾; the agent states he has crossed through the flookan, and intersected the back, which is varied in width. Van Consols, ⅜ to ½; Glyn, 10s. to 15s. West Chiverton, 12 to 14; West Craven Moor, 10 to 12; East Craven Moor, 10 to 11; Aberdaunant, ⅜ to ½; Herodsfoot, 5 to 6; Pateley Bridge, 1½ to 2.

Great Laxey, 20 to 21. North Laxey, 14s. to 16s.; the lode in the 146 ends is very strong, 3 ft. wide, and producing a little lead, and the agent hopes for a rich lode shortly. Minera, 18 to 20; at the meeting, on Aug. 24, a dividend of 5s. per share, free of income tax, was declared, being at the rate of 20 per cent. per annum. The quarterly dividend, paid in May, was at the rate of 16 per cent. per annum. It is stated that strenuous efforts are being made to prejudice the shareholders by the publication of low quotations, which officially the price at which *bona fide* transfers have recently taken place. Glenroy, 1 to 1½; the lode in the shaft is without change, and the ground favourable for sinking. In the 25 end south the lode is 4 ft. wide, with a good mixture of blende. Leadhills,

…s; Pateley Bridge, 2 to 2½; Ladywell (pref.), ⅜ to ⅝; Llanrwst, …½; West Asheton, ⅜ to 1; West Tankerville, ⅞ to 1⅛.

…Rookhope, ⅝ to 1; we understand the directers have just returned …m a visit to this mine, and the returns may be brought up to 100 …s per month. The past sale of 40 tons gave a profit of 100*l.* in …working cost. Ladywell, ⅞ to 1⅛; the sample ores will be …tons of lead ore. South Roman Gravels, ⅝ to ¾; the 45 end east …king very promising, and near a course of ore. Gorsedd and …llyn, ⅝ to 6¼; Denbighshire, 1 to 2; Pennant, 5 to 5¼ Great …rway, 5 to 5¼.

…N FOREIGN MINES shares Argentine 2⅞ to 3¼; Blue Tent, 3 to 3½; …ndee, 2¾ to 3¼; Hultafall, 5¾ to 6½; Birdseye Creek, ⅝ to ⅞; Chon…s, ¼ to ½; Eberhardt and Aurora, 5¾ to 6¼; Exchequer, ½ to ⅝; …ndar, 2¾ to 3; Frontino and Bolivia, 2¼ to 2¾; I.X.L., ⅛ to ⅜; …ull, ½ to ⅝; Last Chance, ⅜ to 1; New Quebrada, 2¼ to 2⅜; Panul…, ⅛ to ¼; Port Phillip, ⅜ to ⅝; Richmond, 4¼ to 4½; St. John del …y, 295 to 305.

The market for Mine Shares on the Stock Exchange remains ex…ingly dull, but the rise in the Bank rate has certainly not pro…ced any further unfavourable effect. Richmonds have fluctuated, …d at one time showed a considerable advance upon last week's …otations, and even the closing prices are somewhat better. A …ew concern is about to be brought forward upon a principle which …ught to be more acceptable to capitalists. Practically the vendors …f the company agree to divide profits equally—the condition of …partnership being that the vendors hand over to the company a …ve years' lease of the Bwlch and Pwlthrydnaid Mines, with the …ore plant and machinery thereon; whilst the incoming capitalists …ish 10,000*l.* working capital. This simplifies matters consider…bly, as all the intending investor has to determine is whether the …ol, is the fair value of the half share of the property purchased. …e property is about seven miles and a half east of Aberystwith, …the high road to Llanidloes; and it is stated that during the last …mpany's operations more than 70,000*l.* worth of silver-lead ore …s raised, and that the Goginan Mine, the workings of which are …within 30 fms. of the Bwlch western boundary, has yielded some …,000*l.* profit on the small capital of 500*l.*; the same lode runs …rough the entire length of the present company's Bwlch sett; …at the Goginan workings are close to the boundary of this mine, …d that there have been recent discoveries of silver-lead ore in …e I shaft. Captain N. Bray writes that a portion of the new or …ld capital would be for erecting some new plant and renovating …me of the machinery, and for timbering and securing the main …ifts and other workings, so that the sinking of the shaft and ex…ending the levels may be resumed; and it is still his opinion (and …at he is not alone) that if 10,000*l.* be provided, they will in all …obability find a productive and remunerative property. The …rospectus will be published in an early Journal.

…New Zealand Kapanga, 1¼ to 2; the latest telegram received from …e mines states that in the Coromandel winze they have struck rich …ad, and that since the previous message they had crushed 30 tons …f quartz and obtained 22 ozs. of gold. The Albion winze is also …owing gold. Yet there is the curious addition that the men are …opped, and that they are waiting for funds. Now, as the first part …f the telegram indicates that the quartz is worth ¾ oz. of gold to …he ton it will be difficult for the shareholders generally to compre…end why Capt. James Thomas does not apply the gold obtained to …he payment of wages instead of permitting the men to stop work. …Anything approaching ¾ oz. of gold per ton of quartz is obtainable, …being an average, there can be no question that the shareholders …are a splendid property, and that the funds obtainable for the gold …obtained would not only pay wages at the mines, but leave hand…some profits for distribution as dividends. If the 30 tons is an ex…ceptional find, and no more of similar quality is forthcoming except …at distant and irregular intervals the shareholders have good reason …to complain that the telegram is calculated to mislead them, and, …therefore, scarcely justifiable.

…Wicklow Peninsula, ½ to ⅝; preference, ¾ to 1; the advices which …the directors have received from the committee of investigation at …Leinster are regarded as very encouraging. The reports from Ku…ltana to July 9. As to the ore returns, it is stated that they have …been raised, dressed and undressed, 355 tons of 17 per cent. ore, or (say) …60*l.*; dredge ore, 360 tons of 5 per cent., 720*l.* = 3720*l.* Every …day they take only adds to the evidence already adduced that they …have so good a property that nothing is wanted to bring it into a …permanent profitable condition but to vigorously follow what is …already discovered with proper appliances. Even now few pro…ductive mines can sustain such an excessive proportion of purely …exploratory work to the tribute work, and so nearly meet the cost …of working at the present very low price of copper, and could they …only extend those works with the energy the case demands, their …highest hopes would eventually be realised.

…St. John del Rey, 290 to 310; no telegram has been received during …the week. Almada and Tirito, ½ to ½; the profit for June was $700. …Don Pedro, ⅜ to ½; the agent writes that a few days ago they started …the east right angles to main cross cut, one south of east, the other …north of west, in order to prove the manto on each side, and on …both of these ends within the last three days they have met with …splendid rich stones of yellow bronze. These ends are looking very …promising. He has great faith in the end driving south of east, …as it will go in under the low-quality ore ground (with mundic) …that they met with in the 150, and as the ore they have met with …in this (165 fms.) level is almost free from mundic, and is of good …quality, he hopes that when they get under the said poor ore …ground they will find some good ore, and in quantity.

…Argentine, 2⅞ to 3¼; a cross-cut has been put out in the bottom …of the Pique shaft, and a portion of the lode discovered standing in …the side, 3 fms. in width, of gossan ore rich in gold. An improve…ment is also reported in the stope in the back of the 44, and in the …same. A meeting is called for next week to consider a resolution …authorising the issue of the necessary capital. Condes, 2¾ to 3½; …parcel of raw ore at Liverpool has this week sold at upwards of …£8 a ton. The executive suggest that the business of the company …should be confined to the shipment of raw ores during the coming …year, as they think that there can be little doubt that the share…holders will thus be amply rewarded with profits.

…Richmond, 4½ to 4¾; no report from the manager has reached the …London office this week. The latest telegram received states that …nothing definite till next week, counsel have demanded special …leave; if not allowed appeal will be by Bill of Exceptions." …The information as to the real meaning and bearing of the judg…ment given by the judges is still meagre and vague. The Eureka …Co. states that whereas the witnesses on the side of the Eureka …Company spoke as with one breath on the subject of the wide lode …theory, the Richmond experts were by no means so uniform in their …opinions. Those familiar with cases of this kind do not generally …draw favourable conclusions as to the *bona fides* of witnesses swear…ing to one key to statements that, to say the least of them, are stag…gering from their novelty and improbability, and when the charac…ter and eminent position of the Richmond witnesses are considered …slight variations in their views add to the weight of their united …testimony.

…Exchequer, ½ to ⅝; it is understood that information has been re…ceived to the effect that good pay ore had been discovered in the …300 and 400 ft. levels, which is regarded as an additional confirma…tion of the statement of the late foreman, Mr. Jackson—that there …are thousands of tons of ore in the present levels which, when pro…perly sorted, would yield a handsome profit. I.X.L., ⅛ to ⅜; the …latest advices state that the shaft is down 96 ft. below the 200 ft. …level, 3 ft. having been sunk during the week; everything in and …about the mine was progressing satisfactorily.

…In Hydraulic or Gold Washing Shares there has been absolutely …nothing doing. Blue Tent are quoted 3 to 3½; the telegram from Prof. …Rice reports the partial clean-up to have yielded $11,500. The last …report received states that they have washed in South Yuba this …week quite successful, similarly to the week previous, and the …ground broken by their blast pipes out well to the very bottom. …The Blue Lead have also commenced washing a little, and are …now in a position to use much more water than they are able to …obtain. All the new arrangements constructed here of late appear…ing to this works very satisfactory, and without the slightest accident or detention since the water was first turned. Malabar, ⅛ to ¼; the agent writes that in the first 10 days of July they ran 191 hours; on the latter date a rather serious slide took place on the ditch (the first they have ever experienced), and some flume was carried away, and their washing totally suspended for four days, a delay which no precaution of theirs could have avoided. Since then they have been washing with tolerable regularity, and he still hoped to make a clean up in time for the mail of July 30.

Hultafall, 5¾ to 6½; the timbering of Maxfield's shaft has been accomplished, and the horse-whim and pithead are nearly completed. The sinking that has been done since Capt. Waters inspected the mine has, it is said, proved the lode to be precisely the same in quality—solid blende and lead. Mr. Green, who has been sent out to plan the dressing-floors and machinery, is expected from Sweden on Monday.

The shares in Lead Mines appear to have been adversely affected by the decline in the price of lead. Grogwinion, 2½ to 3½; the monthly outturn of 100 tons of lead sold yesterday for 11*l.* 18s. per ton. Wye Valley, 3 to 4; a parcel of blende has been sold this week. West Wye Valley, 3 to 4; all operations going on well. St. Harmon, 2½ to 3; good progress making at all points. Red Rock, 1¾ to 2½; the levels are still opening out satisfactorily. South Cwmystwith, 3 to 4; all works progressing steadily.

West Pateley Bridge, 1½ to 2; the lode in the bottom of No. 2 shaft is said to be opening out a good body of ore. The lode in Discovery shaft continues to yield solid rocks of lead weighing over 1 cwt. The cross-cut in the 56 has intersected a branch of lead ore, which the manager expects will lead to important discoveries at an early date. This cross lode has never been hitherto seen in the mine, and is quite independent of the Craven Cross vein in this level. The mine is considered to be opening out in an encouraging manner.

Subjoined are the closing quotations:—

Assheton, ¼ to 1½; Carn Brea, 23 to 25; Devon Great Consols, 3½ to 4; Dolcoath, 23 to 25; East Caradon, ¼ to ½; East Van, 4½ to 5; Glyn, ⅜ to ⅝; Great Laxey, 20 to 22; Hingston Down Consols, ¼ to ½; Leadhills, 5¼ to 5½; Marke Valley, ¾ to 1; Parys Mountain, 5-16 to 7-16; Pateley Bridge, 2 to 2½; Pennerley, 1-16ths to 3-16ths; Penstruthal, ¼ to ⅜; Roman Gravels, 9 to 9½; Tankerville, 6¼ to 6¾; Tincroft, 10 to 12; Van, 30 to 32; Van Consols, ½ to ¾; West Assheton, ½ to ¾; West Chiverton, 13 to 15; West Tankerville, ¾ to 1; Wheal Crebor, 1 to 1½; Wheal Grenville, 1½ to 1¾; Almada and Tirito, ⅛ to ¼; Argentine, 2¾ to 3¼; Birdseye Creek, ⅜ to ⅝; Blue Tent, 3 to 3¼; Cape Copper, 37 to 39; Cedar Creek, ⅜ to ½; Chontales, ¼ to ⅜; Colorado Terrible, 1½ to 2; Condes of Chili, 2¾ to 3¼; Don Pedro, ⅜ to ½; Eberhardt and Aurora, 5¾ to 6¼; Emma, 1-16ths to 3 1-8ths; Exchequer, 3 16ths to 5-16ths; I. X. L., ⅛ to ⅜; Flagstaff, 2⅝ to 2⅞; Frontino and Bolivia, 2¼ to 2¾; Hultafall, 5¾ to 6¼; Javali, ¼ to ½; Kapanga, 1¼ to 1⅜; Last Chance, ⅛ to 1¼; New Pacific, ⅛ to ⅜; New Quebrada, 2¼ to 2⅜; Pestarena, 1 16ths to 3-16ths; Plumas Eureka, 2½ to 3; Port Phillip, 8s. to 10s.; Richmond Consolidated, 4¼ to 4¾; St. John del Rey, 290 to 310; Sierra Buttes, 1½ to 2; San Pedro, ⅛ to ¼; South Aurora, ⅛ to ¼; Tecoma, ⅜ to ⅝; United Mexican, 1⅛ to 2.

COLLIERIES.—A little more activity has during the past week been noticeable on the market for this class of shares, enquiries for investment having no doubt been induced by the improved condition of the coal trade, which from all parts we hear is decidedly better than for some time past. In almost all districts the collieries are kept in better work (and this is a matter of importance, as without any alteration in the price of coal many collieries will make profits if kept in work six days a week, whereas if only a sufficiency of orders be obtainable to allow of working three days a week a serious loss would result), while in some a slight rise in prices may be recorded. Under these circumstances it would appear that the prolonged depression is at length passing away, and advantage of this should be taken to secure good investments. At the annual meeting of the Cannock and Huntington Colliery, held on Wednesday, the Chairman reported that the No. 1 pit was down 346 ft. with the small drill, and 67 ft. to the full diameter, No. 2 pit being 150 ft. down, and 53 ft. to the full diameter, the process used being that of Mr. Chaudron. This was deemed satisfactory. The directors propose to continue the Chaudron process until a depth of 400 ft. be attained, and then to continue in the ordinary manner. The cost hitherto of the works has been 13,000*l.* It is believed it will take two years to complete the sinking to the shallow and deep measures. These attained the quality of the coal is such that there can be no doubt of the success of the company.

Cakemore close about 1¾ to 2¼. Alltami shares finish up at about 4 ta 4½. The prospects of the company are favourably reported upon, the quantity of coal laid open for extraction during the winter months being exceedingly large, whilst quality is everything that may be desired. Mold Argoed, 3 to 3½. Llay Hall close at 9 to 10. The winding engines are at work, and the Main Coal seam is yielding a good output. The Chapel House new pit is down 271 yards; sinking progressing rapidly. The sales of coal for August month are reported even larger than those for July, which were stated to be the largest ever made by the company. The profits per ton also show a slight increase, the coal trade of the district having decidedly improved. The shares close firm at 2½ to 3. Thorpes Gawber shares have been enquired for at about 2 to 2½, and New Sharlston at 3 to 3½. In the South Wales district the coal trade has improved as much as anywhere, and it is satisfactory to note that the great Ynisedwyn Colliery has again been started, and it is said the Great Cyfartha Ironworks, in the Forest of Dean, will soon follow suit. Cardiff and Swansea shares close at about ½, and Newport Abercarn at 3 to 3½. Bilson and Crump Meadow, in consequence of its legal difficulties, is seldom mentioned.

The Starbuck Car and Wagon Company has declared an interim dividend at the rate of 10 per cent. per annum for the half-year ending June 30.

The Fresh and Preserved Meat Agency (Tallerman's Company) report for the six months ended June 30 shows a net profit, after allowing for the debit balance in the previous half-year, of 1480*l.*, from which a dividend at the rate of 5 per cent. per annum is proposed. The manager's percentage of profit is deducted, and 458*l.* is carried forward.

Mr. Alfred Good, the official liquidator of the United Ports and General Insurance Company, announces that a first dividend of 1s. 9d. in 1*l.* on claims under policies, and 5s. in 1*l.* on general claims, is payable at his offices on and after the 28th inst.

Vice-Chancellor Bacon has appointed Mr. Wm. Brooks (Messrs. W. Brooks and Co.) provisional liquidator of the Brighton Livery Stables Company.

*** With this week's Journal a SUPPLEMENTAL SHEET is given which contains: Original Correspondence, Boring Machinery—No. V. (J. Darlington): Stamping Machinery (S. J. Moulton, Willoughby Brothers); Reducing Metallic Ores; Separation of Minerals—the Drum Dresser (J. Roberts); the Proposed National Society of Colliery Managers; Safety Lamps; Mining in the East—No. XIX.; Richmond Consolidated Mining Company; the New Quebrada Mining Company; Lehigh and Wilkes Barre Coal Company; Lead Mining in the High Peak of Derbyshire; Mines and Mining in the Lake District (J. Postlethwaite); Mining in the Calstock District; Commerce, Trade, and Enterprise (R. Tredinnick); Cardiganshire Mines and its Panics; Mining in Cardiganshire (C. C. Marvin); West Tresavean, East Wheal Ellen; Phœnix Lead Mine (R. Symons); Treleigh Wood; New Consols—The Wild Duck, or Sportsman's Arms—Registration of New Companies—The Scotch Mining Share Market—Improved Wheels for Colliery Corves (*illustrated*)—Pulverising and Separating Minerals—Patent Matters—Foreign Mining and Metallurgy.—Meetings of Prince of Wales, Belstone, Birdseye Creek, Ravenscroft, Truro, Tyn-y-Fron, Tolgus, West Poldice, Wheal Peevor, and Gloucester Wagon Companies, &c.

WHEAL NEWTON.—On July 14 this mine sold 30 tons of silver ore, for 1186*l.* 12s. On July 23 a further sale of 20 tons produced 1565*l.* 18s. 11d., and we are informed that two additional parcels, weighing 30 tons, are now *en route* for Wales, while the silver lode itself is reported as continuing to open up very rich. Altogether, therefore, the manager and shareholders are to be congratulated, and the cheerful anomaly in these dull times of an 80 per cent. dividend seems likely to be continued, if not exceeded, in the future.

GREAT HOLWAY (Lead).—Operations are to be commenced here forthwith, and there seems every reason to expect great returns. The position of the property is excellent, and the lodes traversing the sett very strong in character. The capital for the most part is being privately subscribed, and it is expected that a premium will soon be asked in the market.

WEST WHEAL SETON.—A circular has been issued for a general meeting of the shareholders in this mine for Friday, Sept. 7, at the account-house, "To audit the accounts, and transact other business that may be regularly brought before the meeting," when it is confidently believed that a highly satisfactory statement of accounts and agent's report will be presented. It is of the utmost importance in these days of depression in mining, and especially after so much dissatisfaction recently with the shareholders generally respecting overdrawn accounts with their bankers, that the shareholders in this mine should know exactly how they stand with their own bankers, and that this Journal should have a full report of the proceedings at the earliest moment. [There are, it appears, 326 tons of copper ore for sale at the ticketing next week.]

THE PROVIDENCE MINES.—These mines, now to be abandoned by the present shareholders, have sold since 1832, the commencement of the present adventure, about 533,000*l.* of tin and about 58,000*l.* worth of copper ore. They have also paid during the same period the large sum of 113,820*l* in dividends, against about 23,000*l.* total calls. Coupling these circumstances with the fact that a large proportion of the ground included in the setts remains unexplored, a favourable opportunity, if a turn in the tin market should take place, would be offered for mining investment.

LEAD MINING IN NORTH WALES.—The Halkyn drainage system is being vigorously conducted, and the tunnel making good progress under the control of the Diamond Rock Boring Company. North Hendre Mine looks well. The Gorsedd and Merllyn sett, near Whitford, is proving very rich; this lode runs direct through the Great Holway grant; this latter is spoken very highly of. In addition the Partridge and Holway veins are likely to yield great returns.

TOLGUS CONSOLS.—The report presented at the meeting was of a most satisfactory character, and as there now seems capitalists interested in the success of the undertaking who will throw vigour into its development, our readers may look for great results in the future. The sett abounds in mineral wealth, and most advantageously situated. We are glad to learn that machinery is to be erected on the eastern shaft.

MINERAL HILL NEW COMPANY.—At the statutory general meeting of shareholders, held at the offices of the company, Queen-street-place, on Tuesday, it was reported that 1603 shares had been taken up, representing a subscribed capital of 6412*l.*, and the managers were authorised to instruct Capt. Plummer, the company's superintendent at the mines, to proceed with the exploratory works.

ZINC ORES.

ARMAND FALLIZE,
INGENIEUR-CIVIL, A LIEGE (BELGIUM
BUYER
1.—CARBONATED AND OXYDED ZINC ORES (CALAMINE, &c.
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PURCHASERS OF
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, HARD LEAD, BRASS SLAGS AND ASHES, COPPER REGULUS, MATTE, SCORIA, TIN ASHES, TERNE ASHES, &c., and MIXED ORES or REFUSE, containing LEAD, COPPER, TIN, or ANTIMONY.

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PURCHASER OF
MANGANESE, ARSENIC, FLUOR-SPAR, WOLFRAM, BLENDE, CALAMINE, CARBONATE and SULPHATE OF BARYTES, ANTIMONY ORE, CHROME ORE, MAGNESITE, EMERY STONE, PUMICE STONE, OCHRES AND UMBERS, CHINA CLAY, LEAD ORE FOR POTTERS, TALC, &c.

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ROCK BLASTING, SHAFT SINKING, TUNNELLING, MINING, &c., WITH DRILLING MACHINERY, HIGH-EXPLOSIVES, AND ELECTRICITY.—A SPECIALITY.
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AUSTRALIAN TIN—"KANGAROO" BRAND.

Having recently succeeded in REFINING the AUSTRALIAN TIN to the HIGHEST PITCH OF PURITY, the Undersigned is prepared to SUPPLY an article equal to the BEST REFINED ENGLISH.

The uniform assay of the "Kangaroo" brand ranges from 99·70 to 99·90 pure tin. An exhaustive comparative trial of various brands of Australian tin (see annexed report) have proved the

"KANGAROO" BRAND

To be superior to all other Australian tin, and equal to best refined English.

COPY OF REPORT.

"Sydney Galvanising Works, Sydney, Oct. 1, 1875."

"DEAR SIR,—I have much pleasure in stating that I have found the tin smelted at the 'Kangaroo' Tin Smelting Works superior to any other Australian smelted tin I have used in my business up to the present time, and in no way inferior but quite equal to the celebrated 'Lamb and Flag' tin.

This opinion has been arrived at after several carefully executed practical tests, as well as from metallurgical assays.

"I am, dear Sir, yours faithfully,
"S. L. Bensusan, Esq." (Signed) S. ZOLLNER.

Messrs. JOHNSON, MATTHEY, AND CO., the well-known Assayers, report on 24th December, 1875, on a shipment ex Durham, 25 tons of "KANGAROO" TIN, 99·95 per cent. pure tin.

In ordering the "Kangaroo" brand the trade will henceforth ensure uniformity of quality, excellence of texture, and absolute freedom from impurity.

"KANGAROO" TIN SMELTING WORKS.
Sydney, April, 1877. S. L. BENSUSAN.

PROFITS FROM LAST ADVICES 50 PER CENT. IN ONE WEEK. Investment or speculation. The best for large or small sums from active markets. Outlay small. Two special Stocks should be brought to yield 50 per cent this or next account.
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SHARES in the ABOVE, and in all other DIVIDEND MINES, may be SOLD or BOUGHT through EMMENS and Co. (Limited), 134, Palmerston Buildings, Bishopsgate-street, London, E.C.

FOR SALE, the WHOLE or PART:—
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VAN LEAD MINE.—Particulars of this very valuable Mine will be found in the SIXTH EDITION of Mr. MURCHISON'S work on BRITISH LEAD MINES, published THIS DAY, with Maps, &c., price 2s. 6d. The Prefaces to the Six Editions price 1s.
8, AUSTINFRIARS, LONDON.

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ROMAN GRAVELS.	NORTH LAXEY.
GREAT LAXEY.	GLENROY.
MINERA.	WEST TANKERVILLE.
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DERWENT.	

Full particulars of the above and other valuable LEAD MINES will be found in the SIXTH EDITION of Mr. MURCHISON'S work on BRITISH LEAD MINES, published THIS DAY, with Maps, &c., 2s. 6d. The Prefaces to the Six Editions, 1s.
8, AUSTINFRIARS, LONDON.

"Contains a good deal of information that may be useful at present. Mr. Murchison's theory is briefly that on the average British Lead Mines have less of the lottery element in them than any others, and the figures he gives seem to support that view; at all events, those interested in this industry will find his facts and observations worth reading."—*Times.*
"Calculated to be a great benefit to investors."—*Mining Journal.*
"We have great pleasure in recommending his treatise."—*Morning Post.*
"We invite capitalists to look into this means of investment."—*Money Market Review.*

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

LLANRWST.—Will any correspondent inform me if the Llanrwst district has ever produced a good lead mine? as I see that a great deal of capital is raised to work mines there.—INQUIRER: *Chester*.

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

Received,—"J. E. S." (Mosel)—"M. P."—"G. E. R."—"N. L."—"C. H. A."—"A. E."—"Shareholder" (Parys Mountain)—"A. M."—"Shareholder" (Van Consols)—"Reader" (Newport)—"H. S."—"J. C. J."—"Miner" (Wheal Grenville)—"Fair Play" (Bedford United) should write to Mr. Bailey for the information he requires—"Justus"—"Shareholder" (Richmond).

IMPORTANT NOTICE—REDUCTION OF POSTAGE ON THE "MINING JOURNAL."—In consequence of the new POSTAL CONVENTION, which came into operation on July 1, the postage of the *Mining Journal* to many countries will be reduced to one fourth. Henceforth the subscription will be 1*l*. 10s. 4d. per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxemburg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta' Turkey, Morocco, Tunis, and the Canary Islands. Spain 1*l*. 19s. (50 frs.)

AMERICAN SUBSCRIBERS.—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the *Mining Journal* post free, at the price of $8 50c. gold per annum, payable in advance, by remitting to Mr. D. Van Nostrand, publisher, and importer of scientific books, &c., Murray-street, New York; or, direct to our Office, 26 Fleet-street, E.C.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, SEPTEMBER 1, 1877.

SUSPENSION OF COLLIERY MANAGER'S CERTIFICATE.

The principle of making one man—the Certificated Manager—legally responsible for the safety of the pits under his control having been adopted by the Legislature there can be no reasonable ground of complaint against the prosecution of the holders of certificates whenever there is the slightest indication of carelessness or incompetency. It must, of course, be assumed that the certificated manager receives increased remuneration in proportion to the increased responsibility thrown upon him, and that the intention of the Act of Parliament was to place the workmen so far under a kind of military control that the maintenance of strict discipline should be facilitated, and increased safety for the workmen thus secured. The recklessness of the working collier had long been admitted, and the mine officers being too often selected from the ranks of these working colliers it very frequently happened that the management was entrusted to men alike reckless or incompetent. The Act now in force sought to remedy this, and the application of the law in the case of the certificated manager and joint proprietor of the Barrow Hill Coppice and Tansey Green Collieries is likely to prove beneficial to certificated managers and to working colliers also.

Some short time since Mr. JOHN NEWEY (of Messrs. WOODHALL and NEWEY), who had obtained a Certificate of Service to enable him to manage the collieries of the firm, was convicted of six several offences and fined 20*l*. upon one and 40s. upon each of the others, the chief offence resulting in an explosion by which two or three men were killed. The colliery had been laid out on the advice of Mr. WILLIAM SPRUCE, consulting engineer, and the practical working was left almost exclusively in the hands of the practical manager, Mr. SMITH. A working place had been driven out of the upcast airway, but neither brattice nor pipes had been used to carry in the air. SMITH'S view was that the air would get into the stall owing to its position with regard to a pipe connecting the downcast and upcast airways, but the assistant inspector showed that as a matter of fact this air came against a cog-wall in such a way that it could not enter the stall at all. It was also stated for the defence that a complete plan of ventilation was actually under consideration when the accident occurred. The prosecution urged that the appearances after the explosion showed no indication of sudden eruption of gas, whilst the defence urged that for six weeks men had worked in the stall, so that had there been a gradual accumulation of gas the fact would have been discovered earlier, and that the explosion was due to the fracture of the rib and consequent emission of gas. SMITH believed that the stall could be kept non-explosive, and made comfortable for the men to work in, and this view was concurred in by Mr. NEWEY, by Mr. SPRUCE, and by Mr. JOHN HUGHES, one of the mining engineers of the Earl of DUDLEY; but none of these appeared to think that it could be kept more than just below explosive point.

There appears to be a general absence of discipline with regard to everything connected with the management of the colliery, and the Commissioner (Mr. RUPERT KETTLE, county court judge), who has had great experience in colliery legal matters, remarked in his judgment, an abstract of which is given in another column, that the supervision which a certificated manager was required to exercise was altogether one of degree. He could conceive, he said, conditions under which it would be necessary for a certificated manager to make daily inspections of portions of a pit, notwithstanding that he had a competent person under him. If a daily inspection were necessary for the safe working of the pit, or any part of it, then the certificated manager neglected that daily inspection at his own risk. For the defence it was urged that what had happened did not make Mr. NEWEY either "grossly careless" or "an incompetent person;" he had obtained his certificate as the result of previous service as a colliery manager, and was not a scientific man. It was further urged that certificated managers must inevitably depend upon the "competent persons" under them, and that it could not be shown that any report made to Mr. NEWEY had been neglected.

That Mr. NEWEY'S contention was to some extent good is not improbable, but there is a lamentable defect in it. He failed to show that he has used any effort to make the "competent persons" under him do their duty. Had the man second in command known that Mr. NEWEY required full and detailed reports every morning, and that those reports when demanded were thoroughly considered and acted upon, they would have been regularly forthcoming, for SMITH would have been careful to demand them from the man next below him, so far as concerned matters not under his own personal control, and this regularity or discipline would have descended to the lowest collier, and immunity from unnecessary risk would have been the result. It is much to be feared that even the Government Inspectors and their assistants are also far below the standard in this respect, and that the neglect of the Government officials begets corresponding neglect on the part of certificated managers.

That Government Inspectors should be expected to visit all the collieries in their charge periodically is not reasonable, nor are periodical visits at all desirable, but there is a certain amount of supervision which they might exercise with advantage to all concerned. If certificated managers were accustomed to be called upon (without notice, and whenever the Government Inspector happened to be in the district upon other business) to show that the provisions of the Act are being complied with, such neglect and anarchy as that complained of at Mr. NEWEY'S pits, and for which he has been very properly deprived of his certificate for one year, would have been impossible. There is too much reason to fear that the Inspectors are either unacquainted with the existence of sec. 45 of the Act, or that if aware of its existence the fail to comprehend that the "Inspector" therein referred to is the "Government Inspector," and it was as much the duty of Messrs. BAKER and SCOTT to have prevented (not by personal visits to *every* colliery under their inspection, but by occasional visits to some of them, the visits being so made that the certificated managers are compelled to be at all times prepared for them), the existence of the carelessness complained of, as it was the duty of Mr. NEWEY to exercise more control over the "competent persons" under him.

AUSTRALIAN MATERIAL PROGRESS.

The mail which has come to hand this week from the Australasian colonies affords abundant evidence of their material progress. For instance, the Queensland Government intends to construct branch railways from Oxley to Beenleigh, from Ipswich to Harrisville, a line from Brisbane to Sandgate, and a line from the Brisbane Terminus to the Queen's Wharf. A new dock to have a frontage of 2,000 feet is in contemplation at Port Adelaide. Tenders have been invited for the construction of a direct line of telegraph between Adelaide and Melbourne. The revenue of the Victorian railways for the year ending June 30, 1877, amounted to no less than 1,078,082*l*. The imports of sheep and lambs' wool into the United Kingdom from Australasia have also been proceeding on an increasingly vast scale this year, having amounted to July 31 to 249,586,782 lbs, as compared with 237,196,727 lbs. in the corresponding period of 1876, and 215,248,291 lbs. in the corresponding period of 1875. The pastoral interest of Australasia is thus ever growing in importance, and it may be remarked that this is the real secret of the material progress of the Antipodes. From Great Britain alone the Australian colonies have been this year receiving as much as 2,200,000*l*. per month for the wool supplied by them, and the profit realised upon such a turn-over must necessarily be very considerable. It is this profit, indeed, which is month by month building up the capital of Australasia. As capital accumulates at the Antipodes labour has a natural tendency to accumulate also, and accordingly we find the Australasian colonies growing in population and in material resources of every description.

That this is a matter of considerable importance to our iron trade will be at once seen on an examination of the exports of British bar, angle, bolt, and rod iron as well as of railroad iron of all descriptions to the Australias during the first seven months of the last three years:—

	1875.	1876.	1877.
Bar, &c., iron ..... Tons	18,969	11,832	15,931
Railway iron	46,491	15,322	46,005
Total	65,460	27,154	61,936

The imports of the first seven months of this year have been scarcely up to the mark of those of the corresponding period of 1875. Still they have been upon a very considerable scale, and have materially assisted to tide our iron trade over the very severe depression with which it has had to struggle for several months past. It appears to us, however, that the material development of the Australasian colonies is only now commencing. The abundant resources at the disposal of the various Australasian Governments will enable them to develope and pursue a sustained immigration policy, and this must tell in a few years very materially upon the population of the various Australasian colonies. If we wish to see how young communities are built up at the Antipodes, we have but to note that in the three months ending March 31 this year the population of the thriving colony of Victoria increased 3577. This total represents a growth of population at the by no means insignificant rate of 14,308 per annum. The increment of 3577 was, it may be added, made up as follows:—Excess of births over deaths, 2637; excess of arrivals over departures, 940. Even as it is Victoria is steadily adding to its numbers, but we fancy that the growth of Victorian population will proceed before long in an accelerated ratio, and that a similar rapid advance will be noticed in the neighbouring colonies of Queensland, New South Wales, and New Zealand. The progress of the Australias in the past has undoubtedly been slow, painful, and, upon the whole, disappointing, but this is no reason why a much more rapid advance should not be made in the future. If such an advance should be witnessed, we may depend upon it that there will be a sustained demand for railways and other public works in the Australasian group to the solid benefit of many of our home interests and of the Australias themselves.

BRISTOL MINING SCHOOL.—The authorities of this school have transmitted us their programme for the coming session, and we are pleased to notice the very practical character of the course through which their students are taken. We perceive that one day per week is spent in the field or mine, and that this branch of the school-work is made still more complete by a course of lectures by mine managers and others on points of engineering practice. But that the scientific character of the studies of the school is not permitted to suffer from the practical bent the work is made to take is evident, from the fact that of the five doctors of science made this year by the London University two were old scholars of this school, and that the present holder of the chemical scholarship in that university is also a former student. Although collieries are the only mines in the neighbourhood of Bristol, and doubtless the greater number of the students will in future be engaged in the management of this class of mines, yet we are pleased to see that the course of instruction in the art of mining includes a discussion of the working of metalliferous mines. This widens the sphere of the usefulness of the school, and a young colliery manager is certainly rendered an abler engineer by having studied the working of metalliferous lodes as well as the modes of dealing with seams of coal. The course of teaching in laboratory practice seems to have been very carefully worked out, and we are pleased to see the prominence given to the study of the examination of minerals by the use of the blowpipe, for the acquisition of skill in the use of this instrument cannot be too emphatically pressed on the attention of a young mining engineer. The Colston Trustees seem to be determined to make the Bristol School in every way worthy of the city and themselves, and we wish them every success in their effort.

PERU, AND THE SILVER MINES OF CERRO PASCO.—By late advices from Lima it appears that Senor Mieggs is progressing very favourably with unwatering the Cerro Pasco Silver Mines. The Panama Star and Herald, of July 21, says—"The absolute fact of the great riches of the Cerro de Pasco Silver Mines as carefully estimated by competent scientific experts is about to be realised. It is another "Comstock Lode" on a grander scale. The amount of treasure which will shortly be available is estimated at $500,000,000, or 100,000,000*l*. sterling—enough to enrich not only the enterprising men who have undertaken the stupendous enterprise but also by the terms of the agreement to supply the Peruvian Government with the means of meeting its obligations, and establishing its credit upon a secure and permanent basis." The Cerro Pasco Mines were worked for many years during the Spanish dynasty, yielding immense riches, but having no good roads, nor any means of conveying pumps to so great a distance from Lima at that time, and being situated some 10,000 feet above the level of the sea, these wonderful mines became inundated about half a century ago and abandoned. A splendid railroad made by Senor Mieggs with money borrowed by the Government from British capitalists was finished some time since from Callao to Oroya, passing within a few leagues of Cerro Pasco, and a branch line is now being constructed to the mines by Senor Mieggs. The railroad to Oroya has cost an enormous sum of money, and may be considered one of the wonders of the world. Oroya is over 10,000 feet above the level of the sea.

COAL AND IRON IN THE UNITED STATES.—The aggregate production of anthracite and bituminous coal in Pennsylvania to July 28 this year amounted to 13,520,613 tons, as compared with 11,371,523 tons in the corresponding period of 1876, showing an increase of 2,149,090 tons this year. The aggregate movement of coal and coke over the Pennsylvania Railroad to July 28 this year amounted to 2,666,511 tons, of which 2,119,227 tons were coal. The Philadelphia and Reading Railroad Company has dispatched two agents to South America in order if possible to open up new markets for its coal. The agents will visit Rio de Janeiro, Para, Monte Video, and other points on the Atlantic coast; they will also pass through the Straits, and stop at all places of importance on the Pacific coast as far as San Francisco. The agents carry samples of coal with them they will return in about six months. Of 104 locomotives Pennsylvania Railroad attempted to be destroyed by fire during late terrible riots 54 can, it is believed, be repaired. Iron rail ties are being tested upon a section of the Central Pacific Rail they cost twice as much as wood, but they are believed to more durable. In consequence of over supplies by reason of t cent riots the market for all kinds of scrap iron at Pittsburg ported to be "considerably demoralised." Additions are being to steelworks in the neighbourhood of Pittsburg.

RENTAL OF MINES IN ENGLAND.—A Parliamentary paper issued contains returns showing the gross estimated rental and able value of coal, ironstone, and other mines in the different ties of England and Wales. The total number of coal mines is as 2688; rental, 3,393,696*l*.; rateable value, 2,776,920*l*. Numb ironstone mines, 386; rental, 521,204*l*.; rateable value, 43 Other mines, 593; rental, 211,333*l*.; rateable value, 195,394*l*. county, with the largest rental from coal mines is Durham, 747 following which come Lancaster, 570,562*l*.; York (West Ri 479,491*l*.; and Glamorgan, 438,193. Cumberland is the county ing the highest rental from ironstone mines, 174,562*l*.; and (North Riding) is second with 162,571*l*.

REPORT FROM CORNWALL.

Aug. 30.—There is certainly a more hopeful tone abroad in re to mining matters, and this is showing itself not in conversa merely but in more practical ways. Not that there has been very decided improvement, but that one hears less despondency that the future is regarded with more complacency, than was the a few weeks since. Nevertheless, more mischief is being done tide of emigration has again set in somewhat strongly, and the year is out hundreds of young and stalwart miners will left these shores to in many cases become rivals of the Old C in a foreign land.

But Cornwall is not dead yet, and Cornwall will take a great of killing. As Mr. Warington Smyth said the other day at Pho there are immense breadths of mineral land in the county which remain virgin soil, some from the labours of the "old men," did little more than skim the surface, and have well paid fo that they took away in the indications they have left behind courses of the lodes. Here there are stores of wealth to be rea in time to come.

And with regard to the present mines—those old deep which are so often condemned by those who know little mining, but the riches of which, under proper conditions, almost exhaustless—there is abundant hope for them. Of c mines can be worked out, and deep mines are more expensi work than shallow; but the experience of the county is decid against the idea that lodes exhibit any falling off in riches as are followed deeper and deeper still. What is wanted is re and cheaper means of development, and the meetings of the R Cornwall Polytechnic Society (now presided over by one of the eminent of miners, Mr. Richard Taylor) and the Miners' Asso tion, held this week, show that these means are little by little snpplied. New forms of pumping machinery—but here it mu confessed that the Cornish engine is not beat—and new form boring machinery and of air compressors, with new boiler fe and injectors, and similar pieces of mechanism, all tending i direction of greater efficiency and economy, have been again i duced to Cornwall through the medium of the Polytechnic Soc and at the meeting of the Miners' Association not only were t valuable remarks made with reference to boring machinery several important improvements in dressing apparatus were br under notice. So much seed sown must bear fruit some day, th the harvest may be a little long in coming.

A number of the leading members of the British Association prolonged their stay in the West, and have visited Cornwall T seems reason to hope something from this. It does occasion happen that matters strike strangers not only more forcibly in a new light than they do those who are used to them, and of the most important improvements in scientific operations thus come, as it were, from outside.

UNFENCED MINE SHAFTS.—At the West Powder Petty Ses Truro, on Saturday, Mr. M. T. Hitchens, of St. Agnes, was cha with allowing shafts in Perran St. George Mines, Perranzabulo remain in an insecure state. Mr. R. M. Paul appeared for the secutor, Dr. Foster, Inspector of Mines, and Mr. Marrack fo defendant. Dr. Foster stated that he visited the mine and found some shafts very dangerous state, and gave notice to this effect to Mr. Hitchens in Octobe and again in the spring of this year, but on visiting the mine in May he certain shafts still unfenced.—Mr. J. H. Collins said he visited the mine wi Foster on July 3, and found four shafts unfenced, and again on the 28th there was one unfenced.—Mr. Marrack assured the Bench that his client h wish but to carry out the wishes of Dr. Foster, and he called Mr. Hitchens stated that on receipt of the notice he employed men for some weeks in we the shafts, and thought that all that Dr. Foster required had been completed going over the mine afterwards with Dr. Foster, he had pointed out to him which he did not know was on the mine, and which was certainly in a dan state, and this had now been secured.—Capt. S. Bennett said there appeared been a misconception as to the shaft, Dr. Foster referring to another as the that was called by a different name. The Bench inflicted a fine of 10*l*. with

TRADE OF THE TYNE AND WEAR.

Aug. 29.—There is some improvement in house coal, and the mand for steam coal is also good, most of the works being well ployed. The enquiry for coke is pretty fair, but there is no ch in other branches of the trade. The strike at the Ryhope C. still continues, and 50 policemen are employed in protecting men who go down the pit—that is, the deputies and a few hands who have gone in. There is a movement in Durham on part of coalowners to work their mines by non-Union men, and some extent this has proved successful. This need excite no prise, as the heavy burden extorted by the Union on both parti becoming intolerable. The award of Mr. Herschell, M.P., in case of the Northumberland miners has caused some surprise, he has given elaborate reasons for the conclusions he has arrived and he also gives valuable advice to the men as to the future po in the matter of working hours, production of small coal, &c. far as the award goes, Mr. Herschell considers, upon the whole, the owners have failed to prove the allegations upon which based their claim to a reduction of wages. There case was g rally that the coal production of Northumberland was overburd by cost in comparison with other competing districts, and unless a reduction of wages took place the mining interest of district must ultimately be ruined. They, therefore, thought show three things.—1. That the coal production of the compe districts is cheaper than ours.—2. That in consequence of this coals can be sold cheaper; and 3. That these districts are, th fore, they found pushing Northumberland coal out of the ma

With regard to the first count, the umpire finds that as the ow evidence dealt with only one element in the cost of productio wages—and as a low wage might co-exist with counterbalanc heavy expenditure in other directions—say, in plant—that the dence of the wage is no evidence of cheapness in the final ou In some districts, as in Wales, where wages rule lower tha Northumberland, Mr. Herschell found that this counterbalan expenditure took the form of expensive timbering, which had the nature of the roof to be used in large quantities. In the s point, as to the price at which Northumberland and other coal sold, the umpire's arguments tend to show that it is the quali the coal which regulates the price—*i.e.*, that the causes of low p of coals from certain districts is to be found in their inferiority than in the cheapness attending the winning. In the third p that Wales was thrusting Northumberland out of the market. Herschell, again, finds the owners' case not proven, and sums up far as the award proper goes, against any reduction of wages on grounds advanced by the masters. But, beyond the award, Herschell has found it his duty to place on record his views a the present state of the coal trade, and to urge several consi

upon the attention of the men as to the best means of securing improvement. How far these are likely to be effectual in causing such a desirable change from the present state of things opens a wide field for controversy. Whatever opinion, however, may entertained as to the changes Mr. Herschell would adopt in the ployment of mining labour, there can be no doubt that the can- with which he has stated them will not be distasteful even to e who may differ from him. He advises the men to work not than six hours in the face, and to work the coal in such a man- as to produce the largest possible quantity of round coal.

The North of England Institute of Mining and Mechanical En- neers' general meeting will be held on Saturday, when, after the ction of new members, the following paper will be read:—"A scription of an Instrument for Levelling in Mines," by Messrs. Galloway, M.A., and C. Z. Bunny. The following papers will pen for discussion:—"On Different Modes of Lubricating Coal- s or Corves," by Mr. Emerson Bainbridge; "a Description of a ling-Engine with Self-Acting Variable Expansion," by Mr. lliam Page.

The Trimdon Colliery has been stopped, and the horses and ponies ught out, but it is expected that these works will not be stopped ary length of time. It is also understood that the Wheatley Colliery—one of the Original Hartlepool Collieries—will be ned again in a short time.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Aug. 30.—The apprehension which existed in the minds of some ers that there would be a prolonged strike of colliers has been ered by the action of the colliery owners, who have closed with men's offer to accept a reduction of 6d. per day in the Thick coal, 3d. per day in the Thin coal seams. In that respect, therefore, market is more settled. As the result of the new arrangement Dudley and other leading coalowners are about to drop their ations 2s., making his lordship's furnace coal 9s. and 11s. re- tively, instead of 11s. and 13s. This has had the effect of siderably reducing the commercial value of fuel all round. That demand will be stimulated is certain, and the colliers will have e work to do. Buyers of iron are now fully expecting that ted bars will very quickly be declared down 1*l.*, making them ed 6*l.* per ton. Other brands will then tend still further down- ard, and to-day prices are decidedly weaker. Business in iron is erally suspended for the moment, alike buyers and sellers, iting definite action on the part of leading makers.

There has been somewhat more movement in the local Stock Ex- anges. The property of the Sandwell Park Company has re- ved fair attention; the original issue still sells at 18¼, ex n.; new shares have changed hands at 4½ prem., and the fraction- ally at 1¼ prem. The Spon Lane Colliery shares have been bought ¼ dis. The Patent Nut and Bolt Company's property has sold 7 and 7⅛ prem.; the 5 per cent. preference shares of the Patent lt and Axletree Company at 7s. 6d. and 10s. dis., and the ordi- y shares of the same company at ⅜ dis. The shares of the mingham Wagon Company have been purchased at 9½ prem., ex , and there has been considerable activity touching the Metro- itan Railway Carriage and Wagon Company.

At the meeting of the creditors of Mr. W. T. Watts, metal mer- nt, &c., Birmingham, on Friday, the debtor's solicitor attended pared to offer a composition, but it was found impossible to ob- the necessary majority in value of the creditors to carry the position, and, therefore, a petition in liquidation was filed in the unty Court. The statement of affairs show liabilities 83,645*l.*, and ets 30,185*l.* Mr. V. W. Houghton, Waterloo-street, Birmingham, lic accountant, has been appointed receiver and manager of the te. The largest trade creditors are Messrs. Lambert and Co., ner merchants, London.

In North Staffordshire the mills and forges are doing no less than y were a week ago, and orders are rather on the increase, mainly home account. Export orders are very scarce. Ironstone and -iron are in but poor demand. Coal is not selling freely, and rks are heavy. The Chinese Ambassador (Kuo-Tajen), accom- ied by his suite, has been visiting some of the ironworks and istries hereabouts since my last.

At the Sandwell Park Colliery Company meeting, on Tuesday r. P. D. Bennett in the chair), reports were presented by the di- tors and the engineer, to the effect that the works were so far plete that an increasing quantity of coal was being raised for market, the amount sold now reaching 1400 tons a week. After reports had been adopted, a long discussion took place with re- ence to reducing the number of directors, and altering the con- ution of the board. A resolution to reduce the number from en to five did not meet with general favour, and was withdrawn. board, in accordance with notice, placed their resignation in the ds of the shareholders, but, with the exception of Mr. Stokes, ered themselves for re-election, and were proposed by the Chair- n, with the addition of the name of Mr. A. Keen. An amendment s then submitted in which Mr. Septimus Harding and Mr. J. J. ester were proposed to be substituted for Mr. Fellows and Mr. n, who were objected to on the ground that they were largely ested in rival collieries. A poll took place, which resulted in election of the list proposed by the Chairman.

At the Cannock and Huntington Colliery Company meeting, on sday, Mr. F. F. Clarke, Chairman, presiding, there was a large dance, including Messrs. David North, Wm. Butler, W. H. man, John Avins, Wm. North, Joseph Wright, E. A. Wright., rce, W. S. Guy, Geo. Beard (Birmingham), and Dr. Harrison. Chairman said that some shareholders had, perhaps, expected greater progress would have been reported, but if they were that opinion, all he could say was that he wished they could be the board of directors, and understand the great difficulties which to be contended with. He on his part was not dissatisfied with progress that had been made. Both the pits were in active con- ction, and, so far as the plant and machinery were concerned thought they might say that everything was on the ground that ld be necessary to complete the borings. Delay had been caused the breaking of the steel cutters which were used for the drills, at one time there were as many as seven broken cutters in the . He did not think that the company's engineers were to me. for the tools were obtained from one of the best houses in land. It was impossible, however, to go on with such imper- cutters, and they had now, he was sorry to say, been obliged get them from houses on the Continent. It was vexatious to see that in such a country as England steel cutters could not be to suit the company's purposes; but those they were getting m abroad were answering very well, and he was afraid that ess some English house came forward that could supply the ssary quality the directors would, as to the principal part the cutters, be obliged to continue to buy from foreigners. Inquiries had been made as to the relation in which the company ood with M. Chaudron. Under the contract with that gentleman e whole of the expenditure was in the hands of the company. M. audron had to receive no remuneration until all the work was e. The company might, moreover, stop it any moment they ed; and M. Chaudron's remuneration would depend upon the ispeed with which the work was completed, therefore it was to advantage to get the sinking completed as soon as possible. In fact, if the sinking should not turn out in accordance with the di- tors' expectations, M. Chaudron's remuneration would dwindle own to almost a mere nothing. The directors had every reason to satisfied with the way in which M. Chaudron was carrying out contract. A portion of the meeting had wanted to know in what way the 13,000*l.* in the balance-sheet, put down as "Chaudron Sinking," had been spent. He wished to explain that that sum represented the whole machinery and plant of the company, and the labour which had been brought to bear upon it; it represented the new pit-shafts, the sinking that had taken place, the whole of the winding and other machinery, the preliminary pits that were sunk, the drills and the cutters, and a multitude of matters. It must not be supposed that all the outlay which had been expended in sinking under M. Chaudron's method would be ultimately so much out of the pockets of the company, as they would be, to a certain extent, recouped for the expenditure, because much of the machinery, tools, and the like now in use would be saleable when operations were completed.—Mr. Wm. North (the engineer) said he anticipated they would be down to the deep and shallow coal, and have begun to work it, in about a couple of years.—The retiring directors—Messrs. John Avins, Moses Bayliss, and William Butler—were re-elected, and Mr. E. A. Wright expressed a hope that the directors would not reduce their holdings in the concern.—It was carried that the directors in future be paid 500*l.* a year from June 30.—Mr. Duignan spoke in high terms of the probable success of the undertaking.—The Chairman was warmly thanked for the full explanation which he had afforded the shareholders in answer to all questions, and the meeting concluded with thanks to the directors for their past services.

At the Patent Shaft and Axletree Company's meeting, held in Birmingham, on Monday, a dividend of 5 per cent. per annum for the half-year ending June 30 was declared. It will be remembered that the company's operations resulted in a profit of 23,000*l.* on the year, but that in order to make a dividend 9000*l.* has to be taken from reserve. It was officially stated that the company had now, perhaps, more work on hand than they had had for many months.

Beather's Patent Railway Axle-Box Company (Limited), of Saltley, have just issued their report. The result of the year's work does not admit of a dividend, and the balance of the profit and loss account (468*l.* 6s. 5d.) is carried forward. The directors say—"The patent axle-box is, no doubt, gaining favour, as instanced not only by orders from new sources, but more especially by repeated orders from the Colonial Government Railways and others."

At the Spon Lane Colliery Company meeting it was resolved to empower the directors to complete the purchase of the Littleton Hall Colliery, belonging to Mr. W. H. Dawes, for the sum of 1500*l.* It was explained that this step was necessary to free the Spon Lane Colliery from water, and to satisfy the requirements of the Government.

The directors of Muntz's Metal Company (Limited) have resolved to declare an interim dividend at the rate of 10 per cent. per annum, out of the ascertained profits of the six months ending June 30.

SUSPENSION OF A COALMASTER'S CERTIFICATE AS MANAGER.—At the Dudley County Court, on Tuesday, Mr. Rupert Kettle, acting as a Commissioner under the Mines Regulation Act, delivered his judgment in the case of "The Queen *v.* Newey."—Mr. Wynne, one of Her Majesty's Inspectors of Mines, attented as scientific assessor. Some time ago Mr. John Newey (of the firm of Woodhall and Newey) was heavily fined for breaches of the colliery rules, and the Home Secretary directed an enquiry into his fitness as a certificated manager. This enquiry Mr. Kettle, assisted by Mr. Wynne, held about a month ago, and the evidence given in the Police Court was reproduced. Mr. Underhill (instructed by Messrs. Sanders, Smith, and Parrish) again attended to hear the decision, as did also Mr. Scott, the Assistant-Inspector of Mines.—Mr. Kettle, in delivering judgment, said Mr. Newey held a manager's certificate of service for the Barrow Hill, Coppice, and Tansey Green Collieries, of which place he was part owner. In one of the collieries there were three men killed and two injured; in the other there was a serious explosion from gas. The evidence had been most exhaustive, and Mr. Underhill had used every argument in favour of his client. The result of the examination, however, showed that, whilst the general ventilation of the pit was reasonable, no means had been taken to ventilate the places which ultimately proved very dangerous. The means were so simple and so inexpensive that it showed carelessness that they were not provided. He did not intend to refer to the fact that Mr. Newey had four other charges against him for non-entries and for having gunpowder in the pit, beyond saying that they showed how lax was the discipline at the pits, and how carelessly the management was carried. Mr. Kettle then said that the gravest part of the carelessness was in allowing the Tansey Green colliers to work without safety lamps. He did not believe that Mr. Newey knew of the great quantity of inflammable gas in the pits, or he should have directed a very different prosecution against him. That was the first enquiry of the kind in the district, and he regretted to find that Mr. Newey was under the false impression of many managers as to the general ventilation being sufficient for all purposes. He could not believe that Mr. Newey would be guilty of the cruelty of sending men into a dangerous place, but he had been guilty of carelessness. At the same time, he considered that he ought not to be entrusted with the management of either of the collieries until they had been under the control of a diligent manager for some time. He should, therefore, suspend the certificate of Mr. Newey for 12 months, dating from July 27, and he should order him to pay any solicitors' costs which the Government might have incurred in the present proceedings.

REPORT FROM THE NORTH OF ENGLAND.

Aug. 30.—It is really a difficult matter without the dreariest iteration, to make up from week to week a report that shall be at once fresh and interesting touching the staple trade of the North of England. From one day to the next, and so on, the same story is to be told—a story of continued depression, continued lowness of prices, continued and continuous disaster. The monotony of the tale is only relieved now and then by the episode of another firm coming to grief, or "another good man gone wrong," to swell the large catalogue of those who have already gone to the limbo of adverse fortune. The state of trade during the past week has not been in any material aspect an improvement on the many unsatisfactory weeks that have gone before. Business has been quite as prostrate as before, and prices fail to indicate any change for the better. On 'Change at Middlesborough this week the current quotations of the week were 44s. for No. 1, and 40s. for No. 3. It was, however, quite possible to purchase iron for something under these rates for immediate cash. A good deal of iron is going into stock, although how much will not be known until the returns of the Cleveland Ironmasters' Association have been published at the end of the month.

The finished iron trade remains exceedingly dull, as is evidenced by the fact that only about 950 of the 2100 puddling furnaces in the North of England are now at work. Most of the furnaces idle are those that have been carried on in connection with the rail trade, which is now so nearly extinct that not more than 2000 or 3000 tons are now under contract, where it was no rare thing to have from 150,000 to 200,000 tons some years ago. Plate-makers are beginning in some cases to get very slack, but the promised settlement of the shipbuilders' strike on the Clyde will probably mend matters in this direction, the great Scotch river taking most of the ship-plates from the North of England. Prices of plates are very low, some contracts having recently been taken at 6*l.* 10s. per ton. In the demand for merchant iron there is little change to note, while prices remain about the same.

The arrangements for the next provincial meeting of the Iron and Stel Institute, which commences at Newcastle on the 17th prox., are in a forward state. The Council have got a number of very interesting papers promised, and the excursions promise to be of singular interest, seeing that in the near neighbourhood of Newcastle a great many important works and industries are carried on.

The ironstone mineowners of Cleveland do not appear to be much better off than the makers of pig-iron to whom they supply the raw materials. Enormous stocks of ironstone—larger than any that have before been gathered—are heaped up both at the furnaces and at the ironstone mines, and yet the supply of ore has been so much in excess of current requirements that one mine has been stopped after another until now there are nearly a dozen inoperative, including the mines of the Loftus Iron Company, the Kilton and Stanghow Mines, the Liverton Iron Company's mines, and the Belmont Mines of the Weardale Iron Company. The stoppage of so many mines has naturally tended to create a plethora of labour in Cleveland, which, however, is being corrected by many of the miners, who were formerly agricultural labourers, resuming their old pursuits, at least to the extent of accepting harvest engagements. The mineral traffic of the North-Eastern Railway keeps up much more steadily than could fairly be expected, considering the depression of trade in the whole of the district the company serves. The mineral receipts for the last few weeks have averaged well with the corresponding period of last year, and for last week alone there is a considerable balance to the credit of 1877. This is accounted for largely by the demand for coke, not only for Cleveland but for the hematite iron trade of the West Coast, and the steel trade of Sheffield as well.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Aug. 30.—Quietude continues to be the leading characteristic of the Welsh Iron Trade. It is true that the furnaces in blast are turning out considerable quantities of pig-iron, but the prices realised are so unprofitable that it would be almost better for many of the proprietors to close their works altogether. They, however, keep them going with the hope that better times are coming, and also with a view of keeping their hands together, so as to be prepared for any movement in the trade. As usual, the steelworks are fairly employed, and were it not for this new branch of the iron trade the distress among the ironworkers would be far more intense than it now is.

In the Coal Trade business during the week has been comparatively slack, owing to the stormy weather preventing the arrival and departure of ships. It cannot be said that there has been a falling off in the continental enquiry; and from some of the mail packet stations there are somewhat larger orders coming in. Prices remain without change. Much anxiety is felt at Merthyr and Aberdare as to the decision that will be arrived at in regard to the Plymouth and Abernant collieries. It is said that some of the parties interested are in favour of closing the whole concern until more propitious times set in, and if this is carried into effect some 1500 colliers will be thrown out of employ. When it is remembered that all the ironworks belonging to the two concerns, as well as Gadless works, Aberdare, and Cyfarthfa, are at a complete standstill, it will be at once seen what serious results must follow if all the collieries are to be as well stopped.

A very important scheme as affecting the port of Newport and the Rhondda Valley Colliery proprietors is expected to be brought forward next session. The project is to connect the Brecon and Merthyr Railway with the Taff Vale at a point near Pontypridd. To accomplish this it is only necessary to construct a line of some four or five miles long, from the Caerphilly branch of the Brecon and Merthyr to the Taff Vale at Treforest or Pontypridd. The works will not be of a very costly character, as by following the valleys heavy cuttings and tunnels are avoided. The importance of the scheme can scarcely be overrated, both to the colliery proprietors of the Rhondda Valley, to the Rhymney and Brecon and Merthyr Railway Companies, and to the port of Newport. The Rhymney will be enabled by this branch to compete for Rhondda traffic to Cardiff, and the Brecon and Merthyr will be able to bring down Rhondda coal for shipment to Newport. It is scarcely necessary to add that the great coal interests of the valley are unanimous in favour of the project, and that there is every prospect of the necessary powers being obtained in the next session of Parliament.

At the Monmouthshire Railway and Canal Company's meeting (Lord Tredegar in the chair), a dividend at the rate of 6½ per cent. per annum was unanimously adopted. The noble Chairman said that they, in common with their neighbours, had suffered in the half-year through the depression in the coal and iron trades, and there had also been a falling off in the passenger traffic. The guarantee of the Great Western being 6½ per cent. there is no diminution in the dividend, as compared with the corresponding half-year.

ROTARY PUMPS AND ENGINES.

An improved apparatus, intended more particularly to be employed as a rotary pump or engine, but which is also available as a fan or blower, and for the transmission of motion or power by hydraulic, pneumatic, or other fluid agency, has been invented by Mr. J. Harris, of Montreal. The apparatus consists of a wheel mounted fast upon a shaft or axis, which passes transversely through its centre, and is supported in bearings in a suitable frame, so as to be capable of revolving therein. Upon and to the periphery of this wheel he attaches one or more (by preference two) blades or paddles having the form of a disc, such blades or paddles being arranged transversely to the direction of rotation of the wheel. Around the wheel, and concentric with the periphery of the same, he forms an annular chamber, having a continuous slot or opening on the inner side—that is to say, on the side towards the centre of the wheel, which chamber is immovably fixed, and is so adapted to the wheel that the ring formed by the periphery of the wheels fills up the continuous slot throughout the circle of the annular chamber, and that as the wheel revolves the ring circulates in the slot, carrying with it the blade or blades attached to it, and which circulates inside the chamber, having the flat sides in the direction of the rotation of the wheel. At a suitable point in the exterior of the annular chamber he provides a circular opening (connecting with a pipe) of the same area as that of the chamber, and arranged tangentially to the circle formed by the exterior side of such chamber, and at a short distance from such opening he forms a second circular spring, also on the exterior side of the chamber, and tangential to the circle thereof, but in the opposite direction to the first, such second opening communicating with another pipe of the same area as that of the chamber.

Between the first and second openings are attached, on the lateral sides thereof, slide-valve boxes, one on each of two opposite sides, corresponding with which is a slot or narrow opening running around, and dividing the chamber transversely. The two valves which are fitted in these boxes have each the form of a half disc, and are arranged with the curved side outwards, so that when closed they form together a complete disc, which, having the same area as the section of the chamber, closes, and cuts off the communication between the two openings on the exterior side of the chamber. The valve boxes into which the valves open (by sliding in grooves) are of sufficient depth to allow the whole of each valve to be withdrawn from the chamber, thereby leaving the entire sectional area of the chamber free and unimpeded, so that when the valves are fully open the blade or blades is or are free to pass around. The opening and closing of the valves at the requisite times is effected by links turning on centres connected with eccentric or cam wheels on the shaft or axis of the wheel, or they may be actuated by tappets or by any of the known or other convenient means for communicating and regulating such motion.

With regard to the operation of the apparatus, it is explained that when used as a pump motion is imparted to the wheel, which in its revolution carries with it the blade or blades within its chamber. Now, of the two tangential openings, with their pipes respectively, the one constitutes the inlet, or suction opening and pipe, and the other the outlet, or rising main of the pump. The valves being closed, and the communication thereby cut off between the openings, as the blade (or each blade if more than one is employed) circulates in the chamber the water, or other fluid, is forced on before it, a partial vacuum being produced behind it. The water forced onwards is discharged into the rising main, whilst an equal quantity enters through the suction or inlet pipe to supply the vacuum, and thus the continual action of the pump is effected. As the blade approaches, and nearly arrives at, the place of the outlet pipe the slide valve (the mechanism operating them being adjusted accordingly) commence to open, and when the blade reaches a point midway between the two openings the valves are fully open. The blade having passed the valves immediately close, and the communication between the openings remains cut off until the approach of the second blade or return of the first, when they again open and leave the passage free.

When used as an engine the water, steam, or other fluid under pressure entering by one of the openings, which, therefore, constitutes the inlet, exerts its force to move onwards in the chamber the blade which opposed its progress to the outlet, the motive power is thereby also applied to the wheel to which the blade is attached, and thence to the shaft or axis on which the wheel is mounted, which motive power may be transmitted in any convenient manner. The shape of the valves may, of course, be varied, and the wheel may

also be encased on its two sides with sheet metal or other suitable material, so as to form a closed chamber or drum, this arrangement enabling the ring to work with but little friction in the slot, as any water, steam, or other fluid which may escape by leakage is confined to the central chamber or drum. In lieu of forming the continuous slot at the inner side of the annular chamber it may be situate at one of the lateral sides thereof, in which case the ring working in the slot will be at the side of the periphery of the wheel instead of at the circumference, and the valve will be most advantageously placed on the inner side of the chamber towards the shaft or axis of the wheel.

THE IRON INDUSTRIES OF NORTH WALES.

By RICHARD MEADE, Assistant Keeper of Mining Records, Museum of Practical Geology.

Already in a previous notice attention has been directed to the coal fields of North Wales, their extent and production, following with the distribution by railway and analyses of some varieties of bituminous and cannel coal; it is now proposed to consider the occurrence of the argillaceous ores of iron in the coal measures, and those deposits of brown hematite wrought at Cwm Mountain and other districts, with details of produ tion as far as obtainable, and analyses of the ores, the production of pig-iron in these districts, and the quantities of fuel and ore used in manufacture, and some account of the mills and forges and consumption of coal.

The argillaceous ores of iron are not equally abundant in all our coal fields; those in which they are most widely diffused appear to be South Wales, Derbyshire, Shropshire, North and South Staffordshire, Scotland, and Denbighshire, while, on the other hand, scarcely any are found in the great northern coal field of Durham and Northumberland, or that of Lancashire.

The ironstone measures of the Denbighshire coal field furnishes the great bulk of the ironstone smelted in the blast-furnaces of that district. In a section of strata at Ruabon in which these important measures are extensively wrought, they are known to occur interstratified with the seams of coal in the following descending order, as given by the late Mr. Samuel H. Blackwell, who in the year 1851 exhibited in the Great Exhibition a most interesting series of iron ores, illustrating the general iron making resources of the United Kingdom:—

Strata.	Ft.	in.
Three yard coal	9	0
Brassy coal	2	3
Upper yard ironstone, Ruabon—four irregular courses, averaging about 7 in.		
Upper yard coal	2	6
Red coal ironstone balls, Ruabon.		
Red coal	1	6
Stone coal ironstone, Ruabon (four courses).		
Stone coal	2	9
Half yard coal	1	6
Two yard coal ironstone, Ruabon—Lower yard coal ironstone, Ruabon.		
Lower yard coal	3	0
Wall and bench ironstone, Ruabon—six courses, equal to 12½ in., lying in about 7 ft. of ground.		
Wall and bench coals	3	0
Llwynenion ironstone, Ruabon—15 courses, averaging 30 in., all worked with the coal in three lifts; will yield from 8000 to 9000 tons per acre.		
Llwynenion coal	1	6

Some years since a discovery was made of a rich argillaceous ore, consisting of six or seven bands, of a dark ironstone at Trefechan, on the outcrop of the Ruabon coal field, and some 90 or 100 yards below the Llwynenion, or half-yard, coal above referred to. This ironstone does not appear to have been wrought extensively, though it has been used to some extent, and found to yield iron of very good quality. On an adjoining property near Trefechan it is stated that these ores were successfully reduced by a former proprietor, who made from the ores then raised some 30,000 tons of pig-iron between the years 1811 and 1824. Some specimens of this iron it is said shows a curiously close-grained structure, and it will be interesting to learn by-and-bye, with returning prosperity to our iron industries, that this ore receives the attention it deserves.

At the Cwm Mountain, near Prestatyn, in Flintshire, a remarkable deposit of red hematite occurs, closely situated to the far-famed lead mine of Talargoch. The ore here occurs almost entirely as a breccia of angular fragments, cemented by crystalline carbonate of lime, filling large irregular lodes in the carboniferous limestone (Bauerman). Blackband ironstone is raised in some quantities at Ffrwd and Pont Plas Collieries, situated near Wrexham, and belonging to Messrs. Sparrow and Poole, who have been using this stone at their ironworks at Ffrwd for some years past. In calcination blackband usually contains sufficient carbonaceous matter to effect the roasting without the aid of additional fuel.

PRODUCTION OF IRONSTONE.—The largest proportion of the iron ore smelted in the furnaces of North Wales is obtained from the ironstone measures of the neighbourhood of Ruabon. The quantity raised in the year 1855 amounted to 65,820 tons, the hematite ores raised in the same year in the neighbourhood of Rhyl and Cwm Mountain, in Flintshire, amounting to 1320 tons. In the subsequent years, 1856 and 1857, the ironstone measures yielded the following quantities.—

Collieries.	1856—tons.	1857—tons.
Aforeitha	387	367
Brymbo	29,558	30,715
Bryn Mally	1,648	1,5[illegible]
Broughton	82	90
Coedpoeth	1,890	1,[illegible]00
Cwm Mountain (hematite)	—	1,650
Dolydd	200	350
Ffrwd	6,000	6,0[illegible]
Llwynenion	1,200	1,[illegible]50
Nanncrah	—	1,080
Plasissa	6,397	7,142
Quinta	50	—
Traffynant	1,500	1,430
Vron	37	100
Ruabon	18,985	17,000
Total	65,914	70,374

Smaller quantities obtained from other collieries brings the total for 1856 up to 70,000 tons, while in the year 1857 a further quantity of 20,000 tons raised in Flintshire and Carnarvonshire brings the total yield for that year up to 90,374 tons.

The following table shows the production of iron ore of all kinds since the year 1858:—

Year.	Denbighshire. Tons.	Flintshire. Tons.	Carnarvonshire—tons.	Sundry mines. Tons.	Total. No. Wales. Tons.
1858	48,935	3[illegible]90	1650	35,000	88,5[illegible]5
1859	38,822	3500	1750	39,000	87,072
1860	85,000*	—	97	—	85,097
1861	82,500	4000	—	—	86,500
1862	51,700	2456	—	—	54,156
1863	27,550	732	—	—	28,282
1864	23,750	5377	—	—	29,127
1865	97,500	750	—	—	98,250
1866	55,690	992	—	—	56,682
1867	43,500	500	—	—	44,082
1868	35,813	500	—	—	36,313
1869	33,431	62	—	—	33,493
1870	59,140	100	—	—	59,240
1871	51,887	†	—	—	51,887
1872	23,045	4730	—	—	27,775
1873	25,000	3860	—	9,426	38,286
1874	41,157	1070	—	—	44,380
1875	—	—	—	—	42,184

* Including Flintshire. † No return.

The great bulk of the ores raised in North Wales is of the variety known as argillaceous carbonate.

In the annexed table appears the details of production of iron ore from the district or mines of North Wales in each of the years 1874 and 1875:—

District, or mine.	Character of ore.	Quantities. 1874—tons.	1875—tons.
Ruabon Collieries	Argillaceous carbonate	18,498	17,000
Brymbo Collieries	do.	3,344	
Bryn-y-Owen Collieries	do.	386	
Bryn Mally Collieries	do.	276	
Cambrian	do.	—	22
Coedpoeth	Brown hematite	—	39
Cwm Mountain	do.	1,040	25
Dunston	do.	—	5
Ffrwd and Pont Plas	Blackband	2,795	4,352
Main Collieries	Argillaceous carbonate	8,052	
Garden Lodge	do.	—	80
Garnant	do.	—	53
Gutter Hill	do.	—	26
Henfryn	do.	30	10
Llychamore	do.	—	10
Nant Ucha	Brown hematite	2,053	2,242
Vron	Argillaceous carbonate	7,806	—
Wynnstay	Brown hematite	—	1,820
Sundries	Various	—	16,500
Total		44,380	42,184

The value of the above ore in the year 1874 amounted to 22,765*l.*, and in 1875 to 21,092*l.*, giving an average value per ton of 10s.

The total output of the iron mines in the United Kingdom in the year 1875 amounted to 15,821,060 tons, of the aggregate value of 5,975,310*l.*, contributed by Great Britain and Ireland in the following proportions:—

Iron ore.	Tons	Value.
England	12,702,199	£4,694,494
Scotland	2,452,235	920,573
Wales, North	42,184	21,092
Wales, South	495,840	247,920
Ireland	128,602	91,331
Total	15,821,060	5,975,410

The imported ores in the same year amounted to 458,693 tons, from the following countries:—

	Tons	£
Russia	3,602	28,641
Norway	24,192	26,813
Portugal	48,277	55,891
Spain	250,641	273,737
Italy	40,109	46,859
Greece	10,249	14,736
Turkey	8,558	56,975
Algeria	55,620	61,8 8
Other countries	17,425	18,091
Total	458,673	583.571

PRODUCTION OF PIG-IRON.—As far back as the year 1740 the reduction of the ores of iron appears to have been carried on in Denbighshire. The returns of production of pig-iron for that year show the existence of two blast-furnaces, yielding 550 tons of pig-iron, the total make of pig-iron in England and Wales at that time being but 17,350 tons, and the number of blast-furnaces in operation 59, showing an average yield per furnace of 294 tons. Advancing to the year 1788, when the aggregate production of pig-iron in the furnaces of England and Wales amounted to 61,300 tons, of which 13,100 tons were charcoal iron and 48,200 tons coke iron, the former the yield of 24 and the latter of 53 furnaces, North Wales does not appear to have had any share in the manufacture. Later on, in the year 1796, Denbighshire appears to have had five furnaces in operation, yielding 6230 tons of pig-iron, or an average of 1246 tons per furnace. The details of production are found on an enquiry, instituted by the House of Commons at the time that Mr. Pitt proposed to lay a tax upon coals, to be paid without exception at the pit's mouth, a measure subsequently abandoned. The works and their production are shown in the annexed figures in the year 1796:—

Brymbo	884
Brymbo Gate	728
Pentroba	1560
Penyvron	1498
Ruabon	1560 = 6230

The total production at this period (1796), according to the returns of the Excise authorites, is set down at 167,311 tons. Subsequent enquiries showed the quantities actually made in Great Britain not to have exceeded 125,080 tons, a considerable advance on 1788.

The Iron Industries of Great Britain from 1796 to 1806 exhibit a marked progress, increasing nearly twofold in a period of ten years. In the abstract following will be seen the yield of the respective districts at that time, with the number of furnaces built and in blast:—

Districts.	Furnaces. Built.	In blast.	Pig-iron. Tons.
Cumberland	4	4	1,955
Derbyshire	17	11	9,074
Lancashire	3	1	780
Leicestershire	1	0	—
Northumberland	2	2	2,500
Monmouthshire	3	3	2,240
Shropshire	42	30	54,966
Staffordshire	42	32	50,002
Yorkshire	26	22	27,646
Wales, North	4	3	2,981
Wales, South	45	35	68,847
Scotland	27	18	22,840
Total	216	161	243,851

The principal ironworks at this period in Denbighshire were those of Ruabon, of Messrs. Rowland and Co., and those of Brymbo, of Mr. J. Wilkinson. Not again until the year 1823 are we able to note the progress of the iron industries of the kingdom; in that year it was ascertained by Mr. F. Finch that the total production of Great Britain was 455,166 tons, increased to 748,417 tons in the year 1830. The details for both years appear in the annexed table:—

Districts.	1823. No. of Furnaces.	Pig-iron. Tons.	1830. No. of Furnaces.	Pig-iron. Tons.
Derbyshire	15	14,039	18	17,999
Northumberland and Durham	2	2,379	4	5,327
Staffordshire	84	133,590	123	282,604
Shropshire	38	57,923	48	73,418
Wales, North	7	13,100	12	25,000
Wales, South	72	182,325	113	277,643
Yorkshire	26	27,311	27	39,926
Scotland	23	24,500	27	37,500
Total	266	455,166	372	748,417

In the intermediate years, 1826 and 1828, we learn from Scrivenor, in his History of the Iron Manufacture, that the make of pig-iron in North Wales was respectively 15,756 tons and 25,168 tons. Advancing to the year 1840, when the yield of the furnaces of Great Britain amounted to 1,396 400 tons, the North Wales furnaces gave a return of 26,500 tons, showing a falling off when compared with the returns of the previous year, which amounted to 33,800 tons, as stated by Mr. David Mushet, who made an enquiry for the year 1839, and ascertained the total of pig-iron made in that year to amount to 1,248,781 tons. A few years later, when the construction of railways commenced on a large scale, a corresponding development of this and other branches of the iron trade ensued, that it appears from a return to Parliament for the year 1847 the 433 furnaces in blast produced 1,999,608 tons, which five years later increased, as stated on the authority of Mr. Braithwaite Poole, in his Statistics of Commerce, to 2,701,000 tons. The only works in North Wales of which we have any account in the year 1851 are those of Ruabon and Brymbo, the former having three and the latter two blast-furnaces.

We now advance to the year 1854, and find the following works in operation in North Wales:—

Name of works.	Owners.	Furnaces. Built.	In blast.
1.—Brymbo	The Brymbo Company	2	2
2.—Coed Talon	Oakley and Co	1	0
3.—Ffrwd	Sparrow and Co.	1	1
4.—Leeswood	Oakley and Co.	2	1
5.—Ruabon	New British Iron Company	3	3
6.—Plasissa	Samuel Gilkes	1	1
7.—Plaskynaston	Moss and Luker	1	1
Total		11	9

The production of pig-iron in these furnaces in the year 1854 was 32,900 tons, giving an average yield per furnace of 3633 tons. In subsequent years the following statement shows at a glance the number of furnaces built and in blast and the production of pig-iron in Denbighshire:—

Year.	Furnaces. Built.	In blast.	Make of pig-iron. Tons.
1855	11	8	31,420
1857	14	6	37,0[illegible]9
1859	13	6	26,980
1861	12	5	46,658
1863	13	7	51,074
1865	14	7	51,874
1867	9	5	32,843
1869	8	6	38,530
1871	8	5	41,893
18[illegible]2	8	4½	41,464
1873	9	5	42,773
1874	9	6	51,868
1875	9	6	55,099

The returns for the two last years include the production of the furnaces of the Mostyn Coal and Iron Company (Limited), who have two furnaces, both of which were in blast in the year 1874, and one in the year 1875. The yield of the Flintshire furnaces are distinguished in each of the years 1872 and 1873, and amounted to 13,228 tons and 24,690 tons respectively.

To bring this information up to date, appended is the list of works in North Wales in 1875:—

Name of works.	Owners.	Furnaces. Built.	In blast.
Denbighshire.			
Brymbo	Brymbo Iron Company	3	3
Ffrwd	Sparrow and Poole	3	3
Ruabon	New British Iron Company	3	[illegible]
Flintshire.			
Mostyn	Mostyn Coal and Iron Company (L.)	2	[illegible]
Total of North Wales		[illegible]	[illegible]

As previously stated, the average yield per furnace in the 1854 was 3633 tons; in the year 1875 it was 7871 tons, pointing increased capacity and production of the furnaces.

COAL AND IRONSTONE USED IN MANUFACTURE.—As previo stated, the ironstone measures of the Denbighshire coal field sup the great bulk of the ironstone smelted in the furnaces of the trict. In the Flintshire furnaces hematite obtained from the coast is almost exclusively employed. Ironstone is also obt from Staffordshire and Northamptonshire in small quantities f mixture with the native stone, and in the Denbighshire w "purple ore," the residue of the burnt pyrites after the cop extracted, and yielding from 62 to 67 per cent. of metallic ir occasionally used, also mill and forge cinder, rich in iron. argillaceous ores of iron yield an average of from 30 to 36 per of metallic iron. An analysis of ore raised at Trefechan, mad Mr. John Collins, of Bolton, show the following constituents:—

Metallic iron	38·21
Manganese	[illegible]
Magnesia	1·31
Lime	3·39
Alumina	3·03
Water	0·79
Carbonic acid	0·96
Phosphoric acid	33·06
Sulphuric acid	1·09
Ignited insoluble residue	Trace.
	20·06 = 100·00

This stone when calcined gives 51·54 per cent. of metallic iron. hematites of Lancashire and Cumberland, largely smelte l at Mostyn Works, gives an average of from 60 to 66 per cent. o tallic iron. The annexed analyses show the constituents of an rage variety of these important ores:—

	Lancashire hematite.	Cumberland—[illegible]
Peroxide of iron	94·88	[illegible]
Protoxide of manganese	0·04	99·36
Alumina	0·07	0·10
Lime	0·34	0·37
Magnesia	Trace	0·71
Phosphoric acid	0·03	0·06
Sulphuric acid	—	—
Bisulphide of iron	—	—
Silica	4·55	0·16
Insoluble residue	—	—
Water	0·47	8·24
Total	100·38	100·20

The first analyses by Mr. Allan B. Dick yields 63·25 per cent., the second by Mr. Richards, 66·42 per cent. of metallic iron.

In the following statement will be seen the total quantities of iron made in the furnaces of Denbighshire and Flintshire in each the years 1873, 1874, and 1875, and side by side the quantities of and iron ore of all varieties used in its manufacture in each of same years:—

Year.	Pig-iron—Tons.	Coal—Tons.	Ore—Tons.
1873	67,463	187,278	141,[illegible]
1874	51,868	140,492	127,[illegible]
1875	55,099	134,852	139,540

An examination of the figures for the year 1875 show that the rage quantities of coal used in the manufacture of each ton of iron was 49 cwts., and of iron ore 50½ cwts. In the Flintshire w where hematite was employed the average did not exceed 40 of coal and ore to each ton of pig-iron made.

MILLS AND FORGES IN NORTH WALES, AND COAL USED.—T are five of these establishments in North Wales, situated at Ru and Wrexham, and possessing considerable resources for the ma facture of iron. The New British Iron Company's Works at Ru contains 34 puddling furnaces and 4 rolling mills; the Brough Hall Works, near Wrexham, 10 furnaces and 2 rolling mills; the Pontysyllte Works, of Messrs. Jones, Hyde, and Mackay, 1[illegible] naces and 1 rolling mill; the Stansty Works, of Messrs. Forr and Co., with 6 furnaces and 1 mill; and the Llay Hall W where fire-bricks are also manufactured. When in full opera these works consume in the aggregate not less than 70,000 to coal per annum.

TIN-PLATE MANUFACTURE.—This industry in North Wales i presented by two works, situated at Mold and Holywell, in Fl shire. The aggregate make of tin, terne, and black plates in 68 works in the kingdom in 1875 was 2,952,116 boxes, ag 2,529,563 boxes in the year 1874, and 2,685,045 boxes in the 1873. The exports being in the year 1875 2,448,986 boxes, ag 2,143,468 in 1874, and 2,153,477 boxes in 1873. The United S of America received two-thirds of the exported quantities in 1

METAL EXTRACTION WORKS.—The only works in the Pr pality are those of Messrs. Muspratt Brothers and Huntley, sit at Flint. In these works coppery pyrites are operated upon copper being extracted; the residue is an oxide of iron kn "purple ore," and rich in metallic iron, yielding from 62 to 6 cent. In the annexed statement appears the quantity of burn consumed per annum for a few years in the Flint works, and side by side that consumed in the works in Great Britain, and the of purple ores:—

Year.	Flintshire. Burnt ore—tons.	Great Britain. Burnt ore—tons.	Purple ore—
1870	7,000	200,000	175,000
1871	8,500	225,750	200,000
1872	20,600	253,529	153,[illegible]
1873	15,700	323,910	275,000
1874	9,800	329,004	255,000
1875	10,628	365,368	289,000

In the years 1872 and 1873 the works of the Mostyn Copper C pany were in operation, the consumption of burnt ore being re tively 8000 and 5200 tons. The value of the coppery pyrites may inferred from the fact that the average yield of copper therefro about 4 per cent. Thus the 365,368 tons operated upon in the 1875 will have yielded 14,600 tons of metallic copper.

In concluding this notice of the iron industries of North Wale will be convenient to state, in reply to many enquiries recently m in reference to this series of notices, that the only remaining d tricts to be considered are those of Ireland and Scotland, which in due course appear.

WANTED, —REDDING. Send fair sample (per post), price per ton, f.o.b., in lots of 100 and 150 tons.
EDWARD CASPER AND CO., 62, Moorgate-st

WANTED, by a Young Man who has had six years' exper abroad, a SITUATION as ASSAYER or SUB-MANAGER in SM ING or DE-SILVERISING WORKS.
Address, "G. W. M.," 31, Stainsby-road, Poplar, London, E.

MANAGER.

WANTED, a Gentleman thoroughly versed in GOLD QU MINING AND ENGINEERING, and fully competent to under the RESPONSIBLE MANAGEMENT of an IMPORTANT CONCERN work in SOUTH AMERICA. Good knowledge of Spanish desirable, and ceptionable references required.
Address, in first instance, with full particulars, to "P. M. C.," care of and Co., Advertising Agents, Finch-lane, Cornhill.

WANTED, a GOOD SECONDHAND WATER-WHEEL; a SECONDHAND CRUSHER, in good condition.
Apply to Capt. J. ROBERTS, Farm Cottage, Denbigh street, Llanrwst.

WANTED, by a PRACTICAL MINING ENGINEER, APPOINTMENT. The Advertiser has had considerable experi home and abroad. A good assayer. Unexceptional testimonials.
Address, "Azogue," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, an ASSISTANT COLLIERY MANAGER VIEWER for a COLLIERY in FULL OPERATION, near A CASTLE, NEW SOUTH WALES, AUSTRALIA. Must be CERTIFICA and well acquainted with the most approved mechanical COLLIERY ANCES, and capable of TAKING the ENTIRE CHARGE of the COL in the absence of the Manager. Must be a GOOD SURVEYOR and DRAUGHTSMAN. The engagement will be for a term of years, reasonable notice. Salary (with residence and firing) £400 a-year. Tr expenses to colliery allowed.
Applications (in the first instance), with copies of testimonials and ref to be made to C. J. CROUDACE, 5, Argyle-terrace, Workington, Cumberland.
Notice of appointment will be duly advertised.

TWENTY ORIGINAL £5 fully paid-up SHARES in the A GAN LEAD MINE will be SOLD for CASH at £4 10s. per share.
Address, "Z.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

YAL SCHOOL OF MINES,
DEPARTMENT OF SCIENCE AND ART.
TWENTY-SEVENTH SESSION, 1877-78, which will COMMENCE ... October, the following COURSES OF LECTURES and PRACTICAL OPERATIONS will be given:—

EMISTRY	By E. FRANKLAND, Ph.D., F.R.S.
ALLURGY	By JOHN PERCY, M.D., F.R.S.
URAL HISTORY	By T. H. HUXLEY, LL.D., F.R.S.
OLOGY	By WARINGTON W. SMYTH, M.A., F.R.S.—Chairman.
ING	By JOHN W. JUDD, F.R.S.
OLOGY	By T. M. GOODEVE, M.A.
PLIED MECHANICS	By FREDERICK GUTHRIE, Ph.D., F.R.S.
YSICS	By Rev. J. H. EDGAR, M.A.
CHANICAL DRAWING	

Fees for Students desirous of becoming Associates are £30 in one ... or two annual payments of £20, exclusive of the Laboratories. ... separate Courses of Lectures are issued at £3 to £4 each. ... the Queen's Service, Her Majesty's Consuls, Acting Mining Agents ... may obtain Tickets at reduced fees. ... are also admitted to the Lectures at reduced fees. ... Teachers are also admitted to the Lectures at reduced fees. ... and information apply to the Registrar, Royal School of Mines, ... and Jermyn-street, London, S.W. TRENHAM REEKS, Registrar.

BRISTOL MINING SCHOOL.
(ESTABLISHED 1856.)

NEXT SESSION BEGINS ON MONDAY, SEPT. 10, 1877.—... SCHOOL OFFERS a COMPLETE COURSE of INSTRUCTION in ... and ENGINEERING, and the work will be found an effective prepar... the Mine Manager's Certificate. ... LABORATORY is open to those who wish to study PRACTICAL CHE... ANALYSIS, or ASSAYING, though not Members of the School. ... take in the same Institution a SCHOOL of APPLIED SCIENCE for ... which prepares for the work of the Mining School and Laboratory. ... Prizes and any further particulars can be obtained at the Treasurer's ... Merchants' Hall, Bristol, where pupils are entered and fees received, and ... all information can be had concerning lodgings.

THE IRON AND STEEL INSTITUTE.
AUTUMN MEETING, 1877,

NEXT GENERAL MEETING OF THE IRON AND ... STEEL INSTITUTE will be HELD at NEWCASTLE-ON-TYNE, com... on TUESDAY, September 18th. ... Members who may desire to read papers, or to make communications other... the ensuing Meeting, are requested to send early particulars to— ... Chancellor Chambers, London, J. S. JEANS, Secretary pro tem. ... Exchange, and Royal Exchange, Middlesborough.

HOLMBUSH (LIMITED).
... SALE, TWENTY SHARES in this VALUABLE MINE, ... paying 20 per cent. Important discoveries just made, which will greatly ... the Value.—32s 6d. per share. ... Apply "H. M.," Bexconsfield Club, Birmingham.

TO QUARRY OWNERS.
... ADVERTISER would RENT a STONE QUARRY, or ... SHARE ONE in conjunction with the proprietor. Has a practical know... of limestones, and some connection with users. Could develope a most ... profitable business. ... Address "H. F.," care of Mr. William Bletcher, No. 39, Medlock-street, Man...

... ADVERTISER, who has studied in Freiberg, Saxony, offers ... his SERVICES as SUB-MANAGER or ASSAYER at a LEAD or COPPER ... MINE. Two years' experience in Copper and five in Lead Works. ... Address "T. C. S.," Belvoir-terrace, Swansea.

... BURROW AND BUTSON MINING COMPANY (LIMITED).
... PERSONS having CLAIMS upon the BURROW AND ... BUTSON MINING COMPANY (LIMITED) are requested to FORWARD ... PARTICULARS to Mr. ROBERT A. HILL, the Liquidator, at the offices, ... Clifford's Inn, Fleet-street, London. WILLOUGHBY and COX, 13, Clifford's Inn. (Solicitors for the Liquidator.)

...MPING ENGINE ON SALE, 300 H.P., entirely new—
... a Bargain. ...ply,—SUN FOUNDRY, LEEDS.

...DRAULIC PUMPING ENGINES, TWO, 50 H.P.
... ENGINES ON SALE—a Bargain. ...ply,—SUN FOUNDRY, LEEDS.

... SALE, a 14-horse power PORTABLE STEAM ENGINE, ... with link motion reversing gear, also gear to wind and pump. ... horse power PORTABLE. ... horse power VERTICAL STEAM ENGINE, and a 9½ in. cylinder VER... ENGINE, and combined winding drum. ... PAN MORTAR MILL, VERTICAL ENGINE, and BOILER. ... to— BARROWS AND STEWART, ENGINEERS, BANBURY.

... SALE, at NEW PEMBROKE MINE, CORNWALL.— ... Excellent 80 in. cylinder PUMPING ENGINE, with FOUR good 12 ton ... DRAWING ENGINE, and TWO BOILERS. ... SPARE BOILERS. ... IRON STAMPS AXLES. ... 20 ... FLAT RODS, 3½ inch. ... Quantity of ROD PLATES and other MATERIALS. ... to Mr. JOHN POLKINGHORNE, PAR OFFICE, PAR STATION.

...DENHILL COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS,
NEAR STOKE-UPON-TRENT, STAFFORDSHIRE
... KENSHALL WILLIAMSON, MANUFACTURER AND REFINER ... Purchaser of Borate of Lime and Tincal.

...KEL AND COBALT REFINING, AND GERMAN SILVER ... WORKS, 16, OOZELL STREET NORTH, BIRMINGHAM.
... BARKER begs to inform the Trade that he has the following arti... for:— REFINED METALLIC NICKEL. REFINED METALLIC BISMUTH. OXIDE OF COBALT. GERMAN SILVER—IN INGOTS, SHEET, WIRE, &c. NICKEL AND COBALT ORES PURCHASED.

...IGNESS MINING COMPANY (LIMITED).
NOTICE TO INVESTORS.

... APPLICATIONS FOR SHARES in the above company will ... NOT BE ENTERTAINED after THURSDAY, the 13th September, on ... which day the LIST will be CLOSED. ... The machinery, which is in full working order, has been provided, and as the ... sinking of the main shaft progresses the mine improves every inch in depth. A ... cross-cut from which valuable results are looked for, has been met with, and ... several fine stones of very rich ore have been taken. ... The principal or 15-in. vein is expected to be cut from the engine-shaft about ... the end of next, when returns may at once be looked for. ... Applicants are not inclined to take out the purchase money until the disco... very of the main vein are cut into and fully ascertained, and probably the whole ... of the purchase-money will be taken out in shares. ... Prospectuses and forms of application may be obtained at the Bank of Mona, ... Isle of Man, and branches; at the City of Glasgow Bank, Glasgow; or ... at the Office, Secretary pro tem., 46, Athol-street, Douglas, Isle of Man. ... Intending shareholders are invited to inspect the mine, where the fullest infor... mation will be given by Mr. JOHN KNOWLES, the agent, on the property.

GLASGOW AND THE HIGHLANDS.
... ROYAL ROUTE VIA CRINAN AND CALEDONIAN CANALS, ... by ROYAL MAIL STEAMER, "IONA," DAILY, at Seven A.M., and ... GREENOCK, at Nine A.M. ... Guide, with map and tourist fares, free, at Messrs. CHATTO and WINDUS, Pub... lishers, Piccadilly, London; or by post from DAVID HUTCHESON and Co., ... Buchanan-street, Glasgow.

...SSRS. J. TAYLOR AND CO., MINING ENGINEERS AND INSPECTORS, 6, LONDON WALL, LONDON, E.C.,
... Agents in England, Scotland, Wales, and on the Continent.

...PTAIN ABSALOM FRANCIS ...VING AGENT, ENGINEER, AND SURVEYOR GOGINAN, ABERYSTWITH.

Just published, price One Shilling.
...ES AND MINING IN THE LAKE DISTRICT, ... with MAPS and DIAGRAMS.
By JOHN POSTLETHWAITE.
... to the Author, Eskin-place, Keswick, Cumberland.

... NEWCASTLE DAILY CHRONICLE
... CHRONICLE (ESTABLISHED 1764.) AND NORTHERN COUNTIES ADVERTISER ... Offices, Wingate-road, Newcastle-upon-Tyne; 50, Howard street, North ... Shields; 198 High-street, Sunderland.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NEW WHEAL TOWAN MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the above-named company by the Court was, on the 28th day of August instant, presented to the Vice-Warden of the Stannaries by William Harvey, Henry Whitford, William West, William John Rawlings, William Husband, Francis Harvey, and Nicholas James West (carrying on business at Hayle, within the said Stannaries, as General Merchants, under the style of "Harvey and Company"), shareholders in the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Law Institution, Chancery-lane, London, on Wednesday, the 17th day of October next, at Three o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, or their solicitors, of his intention to do so, such notice to be forthwith forwarded to P. P. SMITH, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioners or their solicitors within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 15th day of October next, and notice thereof must at the same time be given to the petitioners or their solicitors. HODGE, HOCKIN, AND MARRACK, Truro, Cornwall. (Solicitors for the Petitioners).

Dated Truro, August 30th, 1877.

TRUMPET CONSOLS MINES,
WENDRON, NEAR HELSTON.

TO BE SOLD, at the Account-house of the Mines, and as a going concern, on Friday, the 7th September next, at Three o'clock in the afternoon precisely, by MR. TRENGOUSE, Auctioneer (subject to such conditions as shall then and there stated and produced), ALL the INTEREST of the adventurers of and in the SETTS or GRANTS and LEASES under which the mining operations have been carried on, together with the WHOLE of the

MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS

now belonging to the adventurers, and now being within, upon, or about the said mines, and the several STAMPS PLOTS held in connection therewith, and comprising—48 in. PUMPING ENGINE, with TWO BOILERS; 24, 24, and 20 in. WINDING ENGINES, with THREE BOILERS; 450 fms. 4, 5, and 6 in. PITWORK; 350 fms. 5, 6, 7, and 8 in. main rods; 600 fms. ladders; 450 fms. flat rods and pulleys; large quantity of chain, kibbles, smith and miners' tools, and various articles and effects in general use in mines; together with numerous heads of water-stamps, dressing-floors, &c.

To inspect the above, apply to Capt. QUENTRALL, the Manager of the Mines; and for further particulars to the Auctioneer, Helston; or to the Purser, HENRY ROGERS, Solicitor, Helston.

Trumpet Consols, 22nd August, 1857.

VALUABLE MINING PROPERTY IN COUNTY ANTRIM.

MESSRS. CASSON AND CHAMLEY WILL SELL, BY PUBLIC AUCTION, at the Furness Abbey Hotel, Barrow-in-Furness, in the county of Lancaster, on Tuesday, the 11th day of September, 1877, at Two o'clock in the afternoon, by the Order of the Representatives of the late JAMES FISHER, Esq., and without reserve, all that well-known MINING PROPERTY, situate in GLENRAVIL, COUNTY ANTRIM, and known as the

GLENRAVIL MINES,

Held under lease dated the 23rd day of November, 1871, for the term of 31 years, from the 1st day of August, 1871, at the yearly dead rent of £400, without any other payment to the lessor, and comprising 960 acres, more or less.

The mine has been in active operation since 1866, the present and average shipment per year being about 20,000 tons.

The quality of the ore is excellent, averaging from 42 to 50 per cent. of metallic iron, and containing a large percentage of alumina.

With the exception of a very small portion, the whole of the ground comprised in the lease is ore ground, and is computed to contain about 7000 tons of ore per acre. The profitable working can be vastly increased on the revival of trade.

There is a tramway connecting the mines with the Ballymena, Cushendall, and Red Bay Railway, and with the county road from Ballymena to Red Bay, thus affording facilities for shipment of the ore both from Belfast and Red Bay.

The mine is in full operation, and will be sold with the tramway, horses, and all working plant, and a stock of about 8000 tons at the pit's mouth as a full going concern.

There are a number of unexpired contracts at remunerative prices which will be handed over to the purchasers.

The Manager will show the Works; and further particulars can be had on application to Messrs. JAMES FISHER and SONS, Barrow-in Furness; to Mr. JOHN FISHER, Glenravil House, Ballymena; to the Auctioneer, Ulverston and Barrow-in Furness; to Messrs. CHESTER, URQUHART, MATHEW, and HOLDEN, Solicitors, 11, Staple Inn, Holborn; and R. B. D. BRADSHAW, Solicitor, Barrow-in-Furness.

GLAMORGANSHIRE.

VALUABLE FREEHOLD AND COPYHOLD ESTATES AND MINERAL PROPERTIES, in the parishes of Neath, Llangelfach, Cadoxton, Glyncarwg, Banwen, occupying an area of upwards of 2000 acres. The portions now let yield a rental of £3600 per annum.

MESSRS. MARSH, MILNER, AND CO. WILL SELL, BY AUCTION, at the Mart, London, on Thursday, the 13th of September next, at Two o'clock, in One Lot, a TWELFTH PART or SHARE of and in the FREEHOLD ESTATE, known as

GLYN COCK,

Containing 54A. 2R. 18P., let at £15 per annum; the Ynisarwed Demesne and the adjoining farms of Blaenllwyd, Penylan, Pantadda, Blaengarcoed, containing 799A. OR. 33P., producing £400 per annum; the Ynisarwed Colliery and Cottages, the Ynisarwed Lower Minerals and Cottages, producing £124 per annum; the Hendregarreg Estate, containing 360A., and producing, with the minerals, £477 per annum; Pyrback Ynisymen, in all about 500A., and of the value of £750 per annum; Cottages and Gardens, called Erron Coed; the Stag Inn, in the Vale of Neath; the Copyhold Farm known as Ynistomlyn, containing 89A. 3R. 35P.; and Blaennant Farm, containing 264A. 2R. 4P.

Particulars of E. H. BARLEE, Esq., Solicitor, 9, Finsbury Circus; and of the Auctioneers, 54, Cannon-street, London.

VALUABLE MINING SETTS, MACHINERY, AND PLANT, IN UNY LELANT, CORNWALL—FOR SALE.

MR. A. BERRYMAN has been instructed to OFFER FOR SALE, BY AUCTION, on the Mine, on Monday, the 17th September next, at noon, as a going concern, the WHOLE of the VALUABLE and EXTENSIVE MINING SETTS, called

THE PROVIDENCE MINES,

Situate in the parish of Uny Lelant, in the county of Cornwall, together with the whole of the EXCELLENT PLANT and MACHINERY thereon, including—

ONE 40 in. PUMPING ENGINE, 9 ft. stroke, with TWO 11 tons BOILERS and FITTINGS.

ONE 30 in. STAMPING ENGINE, 9 ft. and 8 ft. stroke, with TWO BOILERS, 19 tons, two fly wheels and wrought iron shafts, three stamps' axles for forty-eight heads, with heads, lifters, &c.

ONE 23 in. WINDING ENGINE, double acting, 6 ft. stroke, with TWO BOILERS, 10 tons and 8 tons, and WHIM CAGE.

ONE 20 in. MAN ENGINE, double acting, 6 ft. stroke, one fly wheel, two wrought iron shafts, and ONE 8 ton BOILER and FITTINGS, balance bob, &c.

ONE heavy 10 ft. diameter TOOTH WHEEL, with wrought iron shaft plummer, blocks, and brasses.

ONE 8 in. HORIZONTAL ENGINE, 20 in. stroke.

BALANCE BOB at engine, with connecting rod, &c., complete.

ALSO,

ALL THE EXTENSIVE PLANT, MATERIAL, GEAR, AND MACHINERY,

Particularised in an inventory thereof, which may be seen on the mine.

Also, the RICH TIN LEAVINGS throughout the mine, being the accumulation of many years, during the greater part of which this has been one of the largest tin-producing mines in the county. The setts, which have about fifteen years to run, are held upon favourable terms, are large in area, and comprise rich and productive mineral ground. The water charges are remarkably easy, and the mine is most favourably situated for the supply of material.

These mines have sold since 1832, the commencement of the present adventure, about £533,000 worth of tin and about £58,000 worth of copper ore. They have also paid during the same period the large sum of £113,820 in dividends, against about £23,000 total calls. Coupling these circumstances with the fact that a large proportion of the ground included in the setts remains unexplored, a favourable opportunity is now offered for mining investment.

For further information and to view, apply to Capt. HOLLOW, the Manager on the mine; Mr. EDWARD TRYTHALL, the Purser, Penzance; or to the Auctioneer, 28, Clarence-street, Penzance.—Dated 23rd August, 1877.

TO BE LET, ON LEASE, for Twenty-one Years, or such term as may be agreed upon, very valuable MINERAL and COAL MINES, extending over an area of about TWO HUNDRED ACRES, near WREXHAM, in the county of DENBIGH, part of the property known as

THE STANSTY HALL ESTATE,

Containing Main, Powell, and Brassy Coal, varying from three to nearly twelve feet, and the Two Yard Coal, and other good and large Seams of Coal near the Westminster and other Collieries, being the richest and most productive mineral properties in Denbighshire.

Proposals for working the whole or any portion of the above premises, not less than fifty acres, stating the minimum or dead rent recoupable out of royalties in excess of the sum offered, and stating the amount per foot per statute acre offered to be paid for Main, Powell, Brassy, and Two Yard Coal, also per foot per statute acre for all other Seams workable, to be made up to the 24th of September next, to Lady FFRENCH, Elm Park, Merrion, Dublin.

Dated 24th August, 1877.

ASTERLEY COLLIERY,
NEAR MINSTERLEY, SALOP.

TO BE LET, ON LEASE, with immediate possession, the UNEXHAUSTED COAL under about ONE HUNDRED AND EIGHTY ACRES of LAND, situate at ASTERLEY.

The COLLIERY is now in work, and is supplied with WATER and WINDING ENGINES, MACHINERY, and WORKING PLANT, the whole of which can be taken to by the lessee at a valuation.

Applications to view, and further particulars, may be obtained on application to Messrs. SCHOTT and SON, Solicitors, Shrewsbury.

ST. AGNES, NEAR SCORRIER.
POSTPONEMENT OF SALE.

MESSRS. COOPER AND GOULDING beg to announce that, having DISPOSED of the INTEREST of the NEW ST AGNES MINE COMPANY (LIMITED), in One Lot, by private treaty, the SALE advertised for the 11th October WILL NOT TAKE PLACE

Ethelburga House, London, E.C., August, 1877.

VERY VALUABLE MINES—SOUTH-WEST OF IRELAND.

EXTENSIVE AND RICH MINES OF SILVER-LEAD, BLENDE, COPPER, ARSENIC, IRON, &c., which require only to be drained of water in order to make immediate returns of ore. The main shaft will produce about 3 tons of lead ore per fathom. Any amount of machinery may be driven by water-power. Also, THE BEST BARYTES MINE in IRELAND.

Capitalists will find this a safe and profitable investment; and reliable information may be obtained on application to Capt. THOMAS, Cappagh Mine, Ballydehob, Co. Cork, July 23rd, 1877.

VALUABLE CORNISH CHINA CLAY WORKS FOR DISPOSAL.

A Gentleman who is about to retire from business is open to SELL THE ABOVE, which he has worked for more than 20 years, and which contains CLAY OF A VERY SUPERIOR QUALITY, from 3s. to 4s. per ton better than the average of the Cornish clay.

The works comprise about 30 acres of land, in which is almost an unlimited quantity of this superior clay. There are also Hundreds of Thousands of Tons of a beautiful White Clay, suitable for Fire or Fancy Bricks, as this is a refuse clay it would be to hand WITHOUT cost.

Altogether a large and profitable business may be carried on with very little capital.

For further particulars, apply to WALTER HOWARD, Esq., 15, Coleman-street, City, London.

SLATE QUARRY.

A GOOD SLATE QUARRY FOR SALE,—Situated in a FLOURISHING SLATE DISTRICT. Large vein of good quality and colour. Every convenience. Terms moderate.

Reports and samples forwarded on application to Mr. J. D. JONES, Upper Glynrhonwy Slate Company, Llanberis, North Wales.

SLATE QUARRY IN WALES FOR SALE BY PRIVATE BARGAIN.

THE NORTHERN WELSH COMPANY'S QUARRY, "CHAWAREL FAWR," situated near CARNARVON, in the centre of the BANGOR SLATE RANGE, at present in full operation, producing excellent slates, and comprising ONE HUNDRED AND TWENTY-FOUR ACRES, leased from the Crown at a moderate royalty.

For particulars, apply to MOORE and BROWN, C.A., No. 166, St. Vincent-street, Glasgow.

J. FLETCHER-PAGEN, C.E., F.G.S.,
CHAPEL HEYS, BODMIN,
AND
ST. AUSTELL, CORNWALL,

Undertakes the DEVELOPMENT and GENERAL SUPERVISION of MINES and CHINA-CLAY WORKS, and the ERECTION of every description of MINING MACHINERY and PLANT.

REFERENCES TO WORKS COMPLETED, AND IN PROGRESS.

T. R. GLOVER,
MINERAL DEALER AND BROKER AND GENERAL FINANCIAL AGENT
2, EXCHANGE STREET EAST,
LIVERPOOL.

Mr. E. JACKSON,
Associate of the Royal School of Mines,
ANALYST AND ASSAYER.

Assays or Complete Analyses made of Copper, Silver, Lead, Zinc, Tin, and other Ores. ASSAYING TAUGHT.
106, QUEEN VICTORIA STREET, LONDON, E.C.

Mr. SAMUEL HIGGS, F.G.S.,
ADELAIDE, SOUTH AUSTRALIA
(Late of Penzance, and for Seven Years Superintendent of the Wallaroo Mines, S.A.),

Is open to an ENGAGEMENT as SUPERINTENDENT of MINES, or to INSPECT MINERAL or other PROPERTIES in any parts of AUSTRALASIA, INDIA, CHINA, or JAPAN.

For references, apply to ROBERT HUNT, Esq, F.R.S., Museum of Practical Geology, London; J. HALLET BATTEN, Esq. (late B.C.S.), F.R.G.S., late Secretary Royal Geological Society of Cornwall, 5, Manston-terrace, Heavitree, Exeter.

EMMENS AND CO. (LIMITED),
MINING ENGINEERS AND MANUFACTURING CHEMISTS.
CHIEF OFFICE.
134, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
PRINCIPAL WORKS.
REDMOOR, KELLY BRAY, AND WHEAL EDWARD, CORNWALL.

The management of Mines and Chemical Works and the London Agencies of Provincial and Foreign Manufacturers and Commercial Firms undertaken.
Technical Reports and Surveys of every kind made.
MANAGING DIRECTOR—DR. STEPHEN H. EMMENS.

MINING ON THE PACIFIC COAST.

CAPTAIN JOSEPH RICHARDS, MINING ENGINEER, (late of Devon Great Consols and other Mines, and Mineral Agent for Earl Fortescue) may be consulted respecting all MINES on the PACIFIC COAST.

MINES INSPECTED, REPORTS FURNISHED, &c.
Address—
Capt. JOSEPH RICHARDS, M.E., Battle Mountain, Nevada,

TO MINERS IN NORTH AMERICA.

CHEMICAL LABORATORY AND GENERAL MINING OFFICES,

J. S. Phillips, M.E.,
San Francisco.

EXAMINER OF MINES, MINERAL ASSAYER, &c.

Practical Instructions for Testing and Assaying, by Blowpipe, Chemicals, Crucible Scorifier, &c.

Author of the "Explorers', Miners', and Metallurgists' Companion," a practical work of 672 pages, with 91 illustrations. Price, second edition, $10·50.

Inventor of the "WEE PET" Assaying Machine, which obtained a GOLD MEDAL at the San Francisco Mechanics Institute Fair of 1869. Price $100.

Having had Thirty Years' experience (twenty in Cornwall and ten in U.S. America) offers his services to those requiring ADVICE on MINES or MINING, ENGINEERING, ASSAYING, SMELTING, MILLING, and CHEMICAL REDUCTION.

REFERENCES.

In England—The London *Mining Journal*, and leading Cornishmen.
In California—The *Mining and Scientific Press*, and principal Miners & Bankers

MEXICO, NEW MEXICO, ARIZONA, UTAH, NEVADA, AND CALIFORNIA.

F. M. F. CAZIN,
MINING AND CIVIL ENGINEER,
At BERNALLILLO, NEW MEXICO, U.S. OF AMERICA,

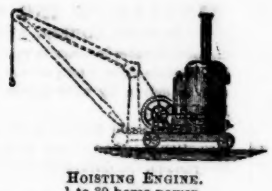
Has 24 years' experience in Mining and Smelting, and 10 years' experience in American Business and Law, offers his services at moderate charges for Reporting on Mining and other Property in any of the above-named States or Territories; gives correct, safe, and responsible advice as to securing full titles and possession; and, as to best mode of utilising the property, will assist in settling existing difficulties by compromise, and in disposing of developed mining property when held at real value; offers his assistance for securing undeveloped mining properties at home prices. As to care taken in reporting, reference is made to the *Mining Journal* Supplement, April 1, 1876, containing report on property of the Maxwell Land Grant and Railway Company; as to technical standing, to the prominent men of the trade—compare *Mining Journal* of Aug. 30 and Nov. 31, 1873, and *New York Engineer and Mining Journal*, Feb. 28, 1874.

CHAPLIN'S' PATENT PORTABLE STEAM ENGINES AND BOILERS

(PRIZE MEDAL, INTERNATIONAL EXHIBITION.)

ALWAYS ON STOCK OR IN PROGRESS.

STATIONARY ENGINE.
From 1 to 30-horse power.
No building required.



HOISTING ENGINE.
1 to 30-horse power.
With or without Jib.

STEAM CRANE.
15 cwts. to 20 tons.
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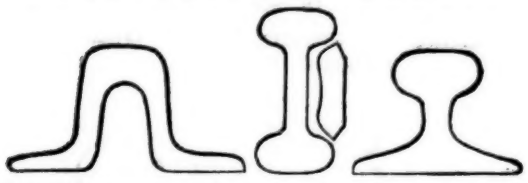

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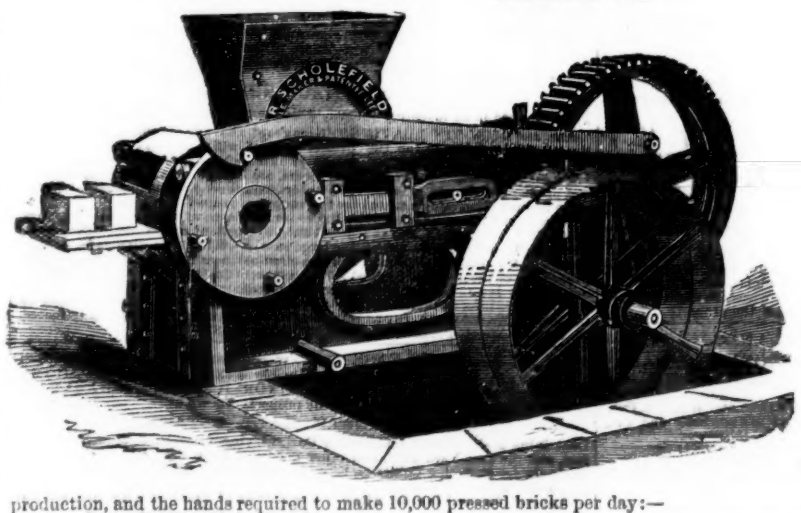

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2 men digging, each 4s. per day	£0	8	0
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1 boy taking off bricks from machine, and placing them in barrow ready for the kiln, 2s. per day	0	2	0
1 boy greasing, 1s. 6d. per day	0	1	6
1 engine-man, 5s. per day	0	5	0
1 man wheeling bricks from machine to kiln, 4s. per day	0	4	0
Total cost of making 10,000 pressed bricks	£1	5	0, or 2s. 6d. per 1000.

(SETTING AND BURNING SAME PRICE AS HAND-MADE BRICKS.)

N.B.—Where the material can be used as it comes from the pit, the cost will be reduced in digging.

As the above Machinery is particularly adapted for the using up of shale, bind, &c., it will be to the advantage of all Colliery Owners to adopt the use of said Brick-making Machinery.

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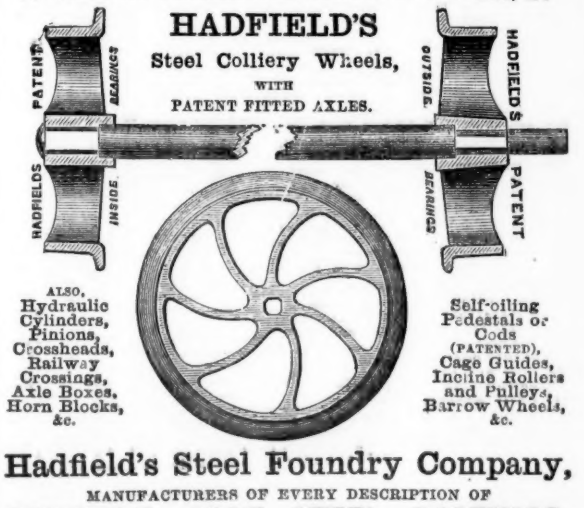

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Shares.	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
1,000	Alderley Edge, c, Cheshire*	10 0 0	...	...	12 11 8	0 5 0	Jan. 1876
15000	Balmynheer, f, Wendron (4000 to is.)	1 0 0	...	...	0 2 0	0 2 0	Nov. 1875
30 000	Bampfylde, c, t, wa., Devon*	1 0 0	1⅝	1⅜ 1⅝	0 2 0	0 2 0	June 1873
4000	Brookwood, c, Buckfastleigh	1 16 0	1	⅛ 1	3 16 0	0 2 0	Nov. 1877
2000	Bryn Alyn,* l, Denbigh. (10l. sh.)	8 0 0	—	...	0 7 0	0 7 0	Jan. 1875
6400	Cashwell, l, Cumberland*	2 10 0	2⅛	2 2¼	1 9 6	0 2 0	Aug. 1876
1000	Carn Brea, c, t, Illogan†§	76 7 6	25	22½ 25	308 0 0	1 0 0	Feb. 1874
2450	Cook's Kitchen, t, Illogan†§	23 17 3	2s.	1s. 2s.	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, c, Tavistock†*	1 0 0	4¼	3¾ 4	116 15 0	0 5 0	July 1877
4298	Dolcoath, c, t, Camborne	10 14 10	24	23 25	111 11 3	0 5 0	July 1877
5000	East Black Craig,* l., Scotland	5 0 0	—	...	0 10 0	0 10 0	Feb. 1877
800	East Darren, l, Cardiganshire	32 0 0	—	...	235 10 0	1 0 0	Aug. 1876
6 00	East Pool, t, c, Illogan	0 9 9	8½	8 8½	15 2 3	0 2 0	June 1877
40 000	Glasgow Cars... c* (30,000 £1 p., 10,000 15s. p.)		1¼	1 1¼	0 12 10	0 0 6	Mar. 1877
7500	Gorsedd and Merllyn Cons., l, Flint	2 10 0	6¼	5¾ 6¼	0 5 0	0 5 0	Aug. 1877
15000	Great Dyliffe,* i, Montgom	4 0 0	4	3 4	0 2 6	0 2 6	Apr. 1876
16000	Great Laxey, l, Isle of Man*	4 0 0	20½	20 21	22 3 0	0 10 0	July 1877
615	Gt. Retallack, l, bl, Perranzabuloe	5 18 6	—	...	0 1 6	0 1 6	May 1876
25000	Gt. West Van, i, Cardigan,* pref.	2 0 0	⅜	⅜ ⅜	0 2 0	0 1 0	Aug. 1874
6400	Green Hurth, l, Durham*	0 6 0	3½	2½ 3¼	1 15 0	0 3 0	Aug. 1877
20000	Grogwinion, l, Cardigan*	2 0 0	3½	2½ 3½	0 12 0	0 4 0	Feb. 1877
9830	Gunnislake (Clitters), t, c	5 5 0	2¾	2½ 2¾	0 13 9	0 1 0	Oct. 1876
1024	Herodsfoot, l, near Liskeard†	8 10 0	6	5 6	62 5 0	0 15 0	Oct. 1872
18000	Hingston Down, c, Calstock*†	0 4 0	⅜	⅛ ⅜	0 1 0	0 1 0	Nov. 1875
60000	Holmbush, a, c, s-l, Callington*	1 0 0	2	1¾ 2	0 3 6	0 0 6	July 187
2800	Isle of Man, i, Isle of Man*†	25 0 0	—	...	82 5 0	0 10 0	Feb. 1876
20000	Leadhills,* i, Lanarkshire	6 0 0	6	5¾ 6	0 6 0	0 6 0	April 1877
400	Lisburne, i, Cardiganshire	18 15 0	80	75 80	882 10 0	1 0 0	July 1877
14000	Llanidloes,* l, Montgomery	3 0 0	2½	1⅛ 2½	0 9 0	0 4 6	Nov. 1876
5120	Lovell, t, Wendron	0 16 0	—	...	0 17 6	0 1 6	Jan. 1874
9000	Marke Valley, c, Linkinhorne	5 3 6	1⅛	⅞ 1⅛	7 15 0	0 2 0	Jan. 1876
9000	Minera Mining Co., i, Wrexham*	6 0 0	—	18 20	67 0 2	0 4 0	May 1877
20000	Mining Co. of Ireland, ci, c, l*	7 0 0	—	...	23 11 6	0 3 6	Jan. 1876
444	North Busy, c, Chacewater	3 9 6	—	...	1 10 0	0 1 0	July 1877
10289	North Hendre, i, Wales	2 10 0	—	...	1 12 6	0 2 6	Aug. 1877
6000	Pedn-an-drea Con., t, Redruth	0 8 6	7⅛	6¾ 7⅛	0 9 0	0 9 0	June 1877
5000	Penhalls, t, St. Agnes	3 0 0	2¾	2½ 2¾	3 13 6	0 2 0	July 1878
6000	Pennant, l, bar, North Wales*	5 0 0	5½	5 5½	0 5 0	0 5 0	Mar. 1877
45793	Penstruthal,* t, c, Gwennap	2 0 0	⅜	⅛ ⅜	0 2 8	0 0 8	Nov. 1877
12000	Phœnix, & W. Phœnix, t, c, Link. §	3 4 9	4¼	4 4¼	2 9 6	0 4 0	Nov. 1872
18000	Prince Patrick,* s-l, Holywell	1 0 0	2¼	1¾ 2¼	0 14 0	0 1 3	Jan. 1876
12000	Roman Gravels, l, Salop*	7 10 0	9¾	9¼ 9½	7 10 9	0 8 6	May 1877
512	South Caradon, c, St. Cleer	1 5 0	110	100 110	738 10 0	2 0 0	July 1877
6128	South Condurrow, t, c, Camborne‡	6 5 6	7½	7¼ 7¾	2 12 0	0 0 6	May 1877
12000	St. Harmon,* l, Montgom	3 0 0	3	2½ 3	0 3 0	0 3 0	Jan. 1877
1 000	So. Fr. Patrick,* s-l. (6000 sh. issued)	1 0 0	—	...	0 7 0	0 1 0	Oct. 1878
1 000	Tankerville, i, Salop*	6 0 0	7	6¼ 6¾	4 17 0	0 5 0	Dec. 1876
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	11	10½ 11½	50 8 6	0 5 0	May 1877
15000	Van, i, Llanidloes*	4 5 0	33	31 33	21 11 6	0 16 0	June 1877
3 00	W. Chiverton, l, Perranzabuloe†	12 10 0	13	12 13	55 0 0	0 10 0	Jan. 1877
1783	West Poldice, St. Day	10 0 0	13	11 13	1 19 0	0 4 0	July 18.6
512	West Tolgus, c, Redruth	95 10 0	75	74 76	22 5 0	1 10 0	Aug. 1877
2048	West Wheal Frances, t, Illogan	28 1 3	1¾	1½ 1¾	3 12 6	0 5 0	Oct. 18.2
12000	West WyeValley,* i, Montgom	3 0 0	4	3 4	0 6 0	0 3 0	Nov. 1876
1024	Wh. Eliza Consols t, St. Austell	20 0 0	—	...	15 0 0	0 2 0	Aug. 1877
2048	Wheal Jane, t, Kea	2 13 10	⅜	⅛ ⅜	8 5 0	0 5 0	July 1878
4295	Wheal Kitty, t, St. Agnes	5 4 6	1⅛	1 1⅛	11 19 6	0 2 6	Dec. 1874
25000	Wh. Newton, a, c, s, t, Calstock*	1 0 0	5⅛	5 5½	0 4 6	0 4 0	June 18.7
80	Wheal Owles, t, St. Just†	86 5 0	80	75 80	522 10 0	4 0 0	Aug. 1876
6000	Wheal Prussia, t, Redruth	2 0 0	4¾	4½ 4¾	0 4 0	0 1 0	July 1877
95000	Wicklow c, sul, i, Wicklow	2 10 0	—	...	52 9 0	0 2 6	Mar. 1872
10000	Wye Valley, i, Montgomery*	3 0 0	4	3 4	0 10 6	0 4 6	Oct. 1876

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Shares.	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
85500	Alamillos, l, Spain*†	2 0 0	1¾	1½ 1¾	1 17 3	0 1 0	Mar. 1877
30000	Almada and Tirito Consol., s*†	1 0 0	⅜	⅛ ⅜	0 0 3	0 1 0	May 1876
20000	Australian, c, South Australia†	7 7 6	2¾	1¾ 2¾	0 19 6	0 1 6	July 18.7
10000	Battle Mountain,* c, (6240 part pd.)	5 0 0	—	...	0 10 0	0 10 0	Nov. 1872
18000	Birdseye Creek, g, California*	4 0 0	⅛	⅛ ⅛	0 14 0	0 2 6	June 1874
12320	Burra Burra,* c, So. Australia	5 0 0	—	...	70 0 0	0 10 0	Oct. 1872
20000	Cape Copper Mining,*† So. Africa	7 0 0	39	37 39	28 15 0	1 0 0	June 1877
40000	Cedar Creek, g, California*	5 0 0	⅛	⅛ ⅛	0 5 0	0 2 6	June 1873
18000	Chicago, s, Utah*	10 0 0	3	2¾ 3¼	2 8 0	0 4 0	Nov. 1876
66000	Colorado United, s-l, Colorado*†	5 0 0	2	1½ 2	0 13 6	0 4 0	Jan. 1878
10000	Copiapo, c, Chili* (£20 shares)	16 15 0	—	...	7 11 5	0 3 0	May 1877
100000	Don Pedro North del Rey*†	0 16 0	⅛	⅛ ⅛	2 8 9	0 2 0	Mar. 1875
28500	Eberhardt & Aurora, s, Nevada*†	10 0 0	6	5¾ 6¼	1 8 0	0 3 0	Dec. 1876
70000	English & Australian, c† S. Aust.	2 10 0	1½	1¼ 1½	2 15 9	0 1 0	Mar. 1877
30000	Flagstaff, s, Utah*	10 0 0	3¼	2¾ 3¼	4 2 0	0 5 0	July 1878
25000	Fortuna, l, Spain*†	2 0 0	6	5 5½	6 9 2	0 6 8	Mar. 1877
55000	Frontino & Bolivia, g, New Gran.*†	2 0 0	2¾	2½ 3	0 1 0	0 1 0	June 1876
30000	Gold Run, hyd.	1 0 0	—	...	0 2 4	0 0 4	Oct. 1872
68000	Kapunda Mining Co. Australia†	1 3 0	—	...	0 2 4	0 0 6	June 1873
20000	Last Chance, s,* Utah	5 0 0	1	¾ 1	0 14 0	0 2 0	July 1873
15000	Linares, l, Spain*†	2 0 0	6½	6½ 7	16 17 2	0 9 0	Mar. 1877
65000	London and California, g*†	2 0 0	⅛	¼ ⅛	0 1 0	0 1 0	July 1875
7837	Lusitanian, Portugal*† (£5 sh.)	3 10 0	—	...	1 11 6	0 1 6	Mar. 1873
8000	Mamm Copperopolis of Utah, c, s	10 0 0	—	...	0 5 0	0 5 0	Dec. 1872
8000	Mountain Chief, s, Utah*	10 0 0	—	...	0 4 0	0 4 0	Jan. 1873
10000	Pontgibaud, s-l, France†	20 0 0	27	25 27	23 1 1	1 11 1	Nov. 1876
100000	Port Phillip, g, Clunes*†	1 0 0	⅛	⅜ ⅝	1 8 0	0 1 0	Jan. 1877
54000	Richmond Consols, s, Nevada*†	5 0 0	4¼	4¼ 4¼	3 9 0	0 7 6	Oct. 1876
40000	Santa Barbara,* g, Brazil	0 10 0	2	1¾ 2	0 3 9	0 1 3	May 1877
120000	Scottish Australian Mining Co.*†	1 0 0	2	1¾ 2	15 per cent.		June 1877
80000	Scottish Austral. Mining Co., New	0 5 0	⅛	⅛ ⅛	15 per cent.		June 1877
112500	Sierra Buttes, g, California*†	2 0 0	⅛	⅛ ⅛	1 16 0	0 0 2	Oct. 1876
60000	South Aurora, s, Nevada*	5 0 0	⅛	⅛ ⅛	0 14 2	0 2 0	Nov. 1873
£253800	St. John del Rey*† (£5 stock & multiples dealt in)		290	310	⅛ year	20 p. ct.	for Dec. 1876
20000	Tolima, g, s* So. America	5 0 0	—	...	0 11 6	0 6 6	May 1874
25000	Victoria (London)*, g, Australia	1 0 0	⅛	⅛ ⅛	0 11 10½	0 0 10	Aug. 1876
15000	Western Andes, s,* New Granada	5 0 0	—	...	12 per cent. per an		July 1876
21000	W. Prussian (5500 pref. sh. 10l. pd)	10 0 0	11¼	10¾ 11¼	1 4 0	0 8 0	April 1877

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
30000	Anglo-Australian, g, Victoria*	2 10 0	—	...	Fully pd.
8000	Anguilla Phosphate, West Indies (4000 issued)	10 0 0	—	...	Fully pd.
12000	Argentine, g, Argentine Republic	5 0 0	3¾	2¼ 3¼	Fully pd.
10000	Australian Central, g* (also 6000 deferred shares)	1 0 0	—	...	Fully pd.
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—	...	Fully pd.
30000	Blue Tent, hyd., California	5 0 0	3¾	3 3¼	Fully pd.
35000	Cesena Sulphur Company, Romanga, Italy*	10 0 0	—	...	Fully pd.
49935	Chontales, g, s, Nicaragua*†	2 0 0	⅜	⅛ ⅜	Fully pd.
18000	Condes of Chili, s-l	5 0 0	3¾	2¾ 3¼	Fully pd.
85000	Excelsior Hydraulic Gold Washing Co., California*	5 0 0	—	...	Dec. 1871
100000	Exchequer, g, s, California*†	1 0 0	⅜	⅛ ⅜	Fully pd.
40000	Holcombe Valley, g,* California	1 0 0	—	...	July 1873
8000	Hornachos,* s-l, Spain	10 0 0	14	13 14	Fully pd.
12000	Hultafall,* l, bl, Orebro, Sweden	5 0 0	6¼	5¼ 6¼	Fully pd.
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—	...	Fully pd.
100000	I. X. L., g, s, California*	1 0 0	⅜	⅛ ⅜	Fully pd.
50 00	Javali, g, Nicaragua*	2 0 0	⅜	⅛ ⅜	Fully pd.
2500	La Manche, l, Newfoundland	10 0 0	—	...	Fully pd.
120 0	Lanestosa,* l, s, Viscaya, Spain (£5 shares)	1 15 0	—	...	Mar. 1876
75 00	Malabar, g, Colombia* (67165 issued)	1 0 0	⅜	⅛ ⅜	Fully pd.
40000	Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1 0 0	⅜	⅛ ⅜	Fully pd.
12000	Menzenberg, c, Honnef, Germany*	5 5 0	⅜	⅛ ⅜	Fully pd.
4588	New Benscerg, t, i, Germany	5 0 0	—	...	Fully pd.
66000	New Quebrada, c, Venezuela*	5 0 0	—	...	Nov. 1876
20000	New Zealand Kapanga, g, Coromandel*	5 0 0	2	1½ 2	Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares)	4 0 0	1¾	1¼ 1¾	Fully pd.
50000	Panuicillo, c, Chili*† (£80000 debentures)	4 0 0	—	...	Sept. 1875
80000	Pestarena United, g, Italy*†	4 0 0	1¾	¾ 1¼	Fully pd.
50000	Providencia and New Rosario, s, Mexico*	1 0 0	⅜	⅛ ⅜	Fully pd.
50000	Rica, g, Colombia* (40000 issued)	1 0 0	⅜	⅛ ⅜	Fully pd.
£2,151,000	Rio Tinto,* c, Huelva, Spain	Stock	59	57 59	Fully pd.
100000	Rossa Grande, g, Brazil*† (£1 shares)	0 19 0	⅛	...	July 1872
30000	Russia Copper, Orenburg and Ufa*†	10 0 0	2¾	1¾ 2¾	Fully pd.
25000	San Pedro, c, Chili*	2 0 0	⅜	⅛ ⅜	Fully pd.
10000	Silver Plume, s, Colorado*	1 0 0	—	...	Fully pd.
30000	Tecoma, s, Utah*	10 0 0	⅜	⅛ ⅜	Fully pd.
20000	Thornhill Reef, g, Australia*	1 0 0	—	...	Fully pd.
43174	United Mexican, s, Mexico*†	28 15 3	2	1½ 2	May 1875
14000	Utah, g, s-l, Utah*	5 0 0	—	...	Fully pd.
75000	Yorke Peninsula, c, South Australia	1 0 0	⅜	⅛ ⅜	Fully pd.
40000	Yorke Peninsula, c, South Australia Preference	1 0 0	1	¾ 1	Fully pd.

§ Have made calls since last dividend was paid

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices.	
Argentine, 1868, 6 per cent.	66	68
Bolivia, 6 per cent.	20	21
Brazilian, 1865, 5 per cent.	94	95
Chilian, 1866, 7 per cent.	99	102
City of Providence, 5 p.c coupon bnds	98	100
Egyptian, 5 per cent. pref.	58	59
Do., unified debt, scrip	35⅛	35¾
Do., 7 per cent., V.M.L.	66	68
Do., 9 per cent. guar.	74	76
Do., 7 per cent., K.M.L.	38	39

	Closing Prices.	
Foreign and Col. Gov. Trust, 6 p. ct	68	73
Do., 5 per cent., 2d issue	53	58
Do., 6 per cent., 3d issue	52	55
Do., 1872, 4th issue	48	53
Do., 1873, 5th issue	48	53
Peruvian, 1870, 6 per cent.	13	14
Do., 1872, 5 per cent	12	12½
Russian, 5½ per cent. L. Mort.		—
Spanish, Quicksilver Mort., 5 p. ct	94	96
United States Mort., 6 per cent.	97	99

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last wk.	Clos. pr
40000	Aberdaunant, l, Llanidloes*	1 0 0	1¾	1 1¼
10000	Aberystwith,* s-l, Cardigan	5 0 0	—	...
80	Albion,* i, Cornwall	100 0 0	—	...
7800	Alvig. & Burng.,*t, St. Aust.	3 0 0	3½	3 3½
18000	Ambrose Lake, t, c, Liskeard	1 18 6	—	...
12000	Assneton, i, Carnarvonshire*	5 0 0	1¾	1 1¼
50000	Ballycummisk,* c, Schull	2 0 0	—	...
12000	Bedford United, c, Tavistock	2 0 6	⅜	⅛ ⅜
28000	Belstone,* c, Devon (27,000 fy. pd.)	1 0 0	—	...
15000	Blaen United,* s-l, Cardigan	1 0 0	—	...
3937	Blue Hills, t, c, St. Agnes	3 7 6	—	...
30000	Bodidris,* l, bl, Denbighshire	1 0 0	1¼	1 1¼
1000	Bollihope Vale,* s-l, Durham	1 0 0	5¾	5 5¾
200	Botallack, t, c, St. Just‡	121 5 0	17½	15 17½
2000	Bowden Hill,* mx	1 0 0	—	...
6000	Bradwell Moss Rake	1 0 0	1	⅜ 1
30000	Caldbeck Fells, i, Cumberland*	2 0 0	—	...
50000	Cambrian,* s-l, c, Cardiganshire	2 0 0	2¼	2 2¾
3348	Cargoll, s-l, Newlyn‡	6 9 0	3½	3 3¾
30000	Central Foxdale, i, I. of Man* (2l. sh.)	1 5 0	—	...
10000	Central Van,* l, bl, Llanidloes	5 0 0	—	...
128	Clementina, l, Llanrwst	20 0 0	—	...
7500	Combellack,* t, Wendron	2 0 0	3	1¾ 2
6000	Combmartin, s-l, North Devon	0 7 0	⅜	⅛
24 00	Court Grange, s-l. (6000 sh. 10s. pd.)	1 0 0	1¼	1 1¼
20000	Cwm Dwyfor,* c, s-l, Carnarvonsh	0 18 3	—	...
65 00	Cwm Lanarch,* s-l, Carnarvon	2 0 0	2½	2 2½
3000	Cwmystwith (New) (5l. shares)	4 0 0	—	...
512	D'Eresby Mountain, l, bl, Llanrwst	20 0 0	25	20 25
10000	Denbighshire Consolidated, l*	3 0 0	1½	1 2
12000	Derwent,* l, Durham	4 0 0	3	2¾ 3
10000	Dubby Syke, i, Durham*	0 12 6	⅛	⅜ ⅛
6144	East Caradon, c, St. Cleer‡	2 16 6	⅛	⅛ ⅜
4000	East Chiverton, i, Perranzabuloe	6 14 6	2¾	2 2¼
3000	East Craven Moor, l, Pateley Bridge	10 0 0	11	10 11
600 0	East Goginan, i, Cardigan	2 0 0	—	...
18000	East Van, i, Llanidloes*	5 0 0	5	4¾ 5
1722	East Wh. Lovell, t, Helston	8 11 0	—	...
90000	Elgar,* s-l, Cardiganshire	1 0 0	1¾	1 1¼
8000	Fronvellan, l, Mont.* (4000 sh. fy. pd.)	1 0 0	—	...
3950	Gawton, c, Tavistock	4 3 6	⅜	⅛ ⅜
12000	Glan Clwyd,* l, Gwyddelwern	1 0 0	—	...
14000	Glenroy,* s-l, Isle of Man	4 0 0	1½	1 1¼
10000	Glyn,* i, Llanidloes	2 0 0	⅜	⅛ ⅜
12000	Goginan, & Level Newydd, Card., l	2 10 0	—	...
100000	Gold, g, Merionethshire	1 0 0	—	...
20000	Goren,* s-l, Carmarthen	1 0 0	1¾	1¼ 1¾
20000	Gt. E. Foxdale, l, I. of Man (1l. sh)	0 18 0	—	...
12000	Great Holway,* l, Flintshire	5 0 0	5¾	5 5½
9500	Great Pant-y-Pydew, i, Holywell	2 0 0	—	...
6000	Gt. Wheal Eleanor, t, North Bovey	1 0 0	3	2 3
18000	Grosvenor, l, Holywell (£1 sh.)	0 15 0	—	...
10000	Harehope Gill,* l, Durham (£1 sh.)	0 5 0	—	...
64 00	Harwood,* l, Durham	0 15 0	1	1
5 00	Hush Eisteddfod Miners,* l	2 0 0	—	...
200	Islay,* i, Scotland	28 0 0	—	...
2500	Killaloe, sl, Tipperary‡	1 0 0	—	...
6000	Killifreth, t, Chacewater	2 1 0	¾	⅝ ¾
25000	Kingston Con., s-l, Stoke Climsland, Ditto, preference	1 0 0	—	...
12000	Ladywell,* l, Salop	1 0 0	½	⅛ ⅜
12000	Ditto, 10 per cent. pref., 1l. each	2 10 0	1¾	1 1¼
2500	Levant, c, t, St. Just	0 10 0	⅜	⅛ ⅜
25000	Llanrhaiadr, l, Montgomery*	9 6 6	—	...
30000	Llanrwst,* l, Carnarvon	2 0 0	4¾	4 4¾
15000	Llwyn Teify,* s-l, Cardigan	1 0 0	—	...
6000	Medlyn Moor, t, Wendron	1 17 4	2	2
3500	Mellanear Copper, Hayle*	2 0 0	2¾	2¼ 2½
6000	Ditto	1 15 0	2	1¾ 2
1000	Meyarlaw, l, Cardigan*	3 0 0	¾	⅛ ¾
11000	Monydd Gorddu, l, Cardigan* (Red.)	5 0 0	4	3 4
25000	Nant-y-Ronen, s-l, Cardigan*	1 0 0	—	...
15000	Nascent Copper*	1 0 0	—	...
4525	New Bronfloyd,* l, Cardigan (5l. sh.)	3 10 0	—	...
20000	New Consols, s, a (in liquidation)	—	—	...
8000	New Dolcoath, t, c, Camborne*	3 0 0	1¾	1½ 1¾
20000	New East Foxdale, s-l, Isle of Man	0 18 0	—	...
18000	New Fowey Consols, t, St. Blazey*	3 0 0	2	1½ 2
1492	New Hendra, t, Breage	3 9 0	—	...
3200	New South Merllyn, l, Flint*	2 10 0	1	½ 1
50 00	New Wheal Emma, c, Buckfastleigh	2 0 0	—	...
4 00	North Cornwall, i, Cornwall	5 0 0	5	4½ 5
17000	North Laxey,* Isle of Man	2 0 0	⅜	⅛ ⅜
2000	North Levant, t, c, St. Just‡	12 2 0	—	...
20000	North Prince Patrick,* l, Holywell	1 0 0	—	...
5936	North Treskerby, c, St. Agnes	3 17 10	—	...
2000	North Wheal Towan, t, c, Illogan	1 19 6	—	...
2500	Old Tincroft, c, t, Lelant*	4 0 0	4	3 4
6400	Oola Hills,* s-l, Limerick	5 0 0	—	...
12000	Pandora * l, Carnarvon	2 0 0	1¾	1 1¼
30000	Panty Mwyn,* l, Mold (8794 iss.)	2 0 0	2	2 2
16923	Parys Mountain,* c, Anglesea	3 0 0	⅛	⅜ ⅛
4000	Pateley Bridge, l, Yorkshire	5 0 0	2½	2 2½
30000	Perkins Beach, l, Shropshire	1 0 0	1¾	1 1¾
12000	Piynlimmon, l, Llanidloes*	2 0 0	⅜	⅛
848	Polrose, t, Breage	21 0 0	—	...
10000	Port Nigel,* s-l, Carnarvonshire	2 0 0	2½	2 2¾
2000	Prideaux Wood, t, Llanivery	5 0 0	—	...
5182	Prince of Wales, c, Calstock‡	2 2 0	⅜	⅛ ⅜
10000	Red Rock,* l, Cardigan	2 0 0	2¼	1¾ 2¼
6000	Relistian Consols, c, Gwinear	0 10 0	⅜	⅛ ⅜
18000	Rookhope, l, Durham*	1 10 0	1	⅜ 1
5000	Silvercross,* c, t, Marazion	1 0 0	⅜	⅛ ⅜
4200	Snowbrook, s-l, Montgomery	5 0 0	5¼	5 5¼
1000	So. Cwmystwith, i, Cardiganshire	2 0 0	4	3 4
8000	South Darren, i, Cardigan*	1 10 0	—	...
512	South Dolcoath, c, t, Redruth	12 5 0	1¼	1 1¼
18000	South Roman Gravels, l*	1 10 0	⅜	⅛ ⅜
6000	South Roskear, t, c, Camborne	6 10 0	8	4 6
6000	South Tolcarne, t, c, Camborne	1 14 0	⅜	⅛ ⅜
937	South Wheal Crofty, c, Illogan	38 1 0	9	8 9
4500	South Wh. Frances, t, Illogan†	7 12 4	⅜	⅛ ⅜
432	Spearn Moor, t, Penzance‡	47 17 9	—	...
6000	St. Lawrence, Amal., l, Flintshire*	2 0 0	—	...
10000	St. Patrick, l, Halkin, Holywell*	1 0 0	1¾	1¼ 1¾
6000	Success, &c., i, Derb. (12,000l. called)	1 0 0	—	...
16000	Sunnyside,* l, Durham	2 0 0	2¾	2 2¾
30000	Talybont, s-l, Cardiganshire	1 0 0	1¾	1 1¾
6400	Teesdale,* i, Durham	1 0 0	¾	⅛ ¾
14000	Teign Valley, l, bar., Bridford	1 0 0	—	...
10000	Temple, i, Cardigan*	1 0 0	1¾	1 1¼
10000	Tolgus Consols,* c, Redruth	5 0 0	5¾	5 5¼
12000	Trebeigh Consols, s-l, St. Ive	0 9 0	⅜	⅛ ⅜
6000	Treleigh Wood, t, Redruth	6 1 0	—	...
547	Trelyon Consols	15 0 0	⅜	⅛ ⅜
12000	Trethellan, s-l, Crantock*	2 0 0	—	...
640	Truro*, l, Nerquis, Flintshire	10 0 0	—	...
10000	Tyn-y-Fron,* l, Cardigan	1 0 0	1¼	1 1¼
20000	Van Consols, i, Llanidloes*	2 10 0	⅜	⅛ ⅜
1000	Vaughan*, i., Cardiganshire	10 0 0	—	...
12000	West Assheton, l, Carnarvon	1 0 0	1	¾ 1
6000	West Basset, c, Illogan†‡	5 13 4	2s.	1s. 2s.
8500	West Combmartin, s-l, North Devon	1 0 0	⅞	⅝ ⅞
700	Ditto	0 2 6	¾	⅛ ¾
3000	W Craven Moor, l, Pateley Bridge*	10 0 0	12	10 12
5000	West Godolphin, t, c, Breage	2 6 0	3	2½ 3
12000	West Goginan, Cardiganshire	2 0 0	1¾	¾ 1¼
10000	West Llangynog, s-l, Montgomery	2 0 0	—	...
3000	West Mary Ann, l, Menheniot	0 3 6	1	⅜ 1
30000	West Milwr, s-l, Flint	1 0 0	—	...
8000	West of England Granite Company	2 0 0	2	2
2000	West Pateley Bridge, l, Yorksnire	1 0 0	1¾	1¼ 2
1000	West Roskear, t, s-l, bl, c, Camborne	2 0 0	15	4 5
12000	West Tankerville,* l, Salop	3 0 0	1½	⅜ 1¼
3000	Ditto, 15 per cent pref.	3 0 0	2	1¾ 2
15000	West Tresavean,* c, t, Gwennap	1 0